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# CRITICAL REVIEW.

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For FEBRUARY, 1786.

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*Various Subjects of Natural History, wherein are delineated Birds, Animals, and many curious Plants. By J. Miller. Six Numbers, at 1l. 1s. each, containing Six coloured Plates. Large Folio. Sewell.*

THESE large and very beautiful prints are designed as a supplement to the author's botanical work; and we equally admire the strength and spirit of the attitudes, the splendid colouring, and the judicious choice of the different subjects. We regret only, that from the great care and attention employed in the execution, they must be necessarily beyond the reach of many ardent votaries of the science which they so strikingly illustrate. Six Numbers have only yet appeared; and we shall enumerate the subjects of each.

The first plate contains the *loxia orix*, a new species, first described in one of the *Mantissæ* of Linnæus, 527; and a species of *antholyza*, the *a. canonia*.

Another species of *loxia*, the *l. coronata*, and a very elegant one of the splendid genus *alstroemeria*, viz. the *a. ligta*. The *a. pelegrina* was admitted into the palaces of the Peruvian kings, while the other ornaments were golden imitations of different vegetables\*. It is now well known in our hot-houses. The *loxia longicauda*, and the *gnaphalium eximium*, from the vegetable kingdom, are the subjects delineated in the third table. In the fourth, the colouring in the copy before us is not laid on with the minute exactness which distinguishes it in the other plates. Its subjects are the *psittacus atricapillus*, and the *chelone penstemon*. In this table, as well as in most of the others, where a flower is delineated, the different parts are separately engraved; and, if necessary, magnified.

In the fifth are the *psittacus aurantius*, and the *illicium floridanum*: in the sixth, the *upupa promerops*, though it is

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\* *Amœnitates Academicæ*, vol. vi.

doubtful whether the specimen be not a new species ; with the *eryngium alpinum*.

In the seventh table is a representation of one of the most splendid plants which the new discovered islands of the Pacific Ocean yield. Its leaf and habit resemble the magnolia, its flower is very different. Mr. Forster has called it the *Barringtonia speciosa*. It is found also on the eastern coasts of India. The next table presents us with the *ampelis Carolinensis*, and a new plant, the *amaryllis crispa*: the ninth, with a new plant from *Æthiopia*, the *antholyza Æthiopica*. The tenth is the Canadian elk, the *cervus alces* of Linnæus. The eleventh, the *lacerta chamelion*, with its long tongue which entangles flies. The twelfth, the *larus albus* from the arctic regions: and the thirteenth, the *lemur murinus* from Madagascar, in its waking, and singular sleeping state.

The fourteenth table contains an accurate and splendid representation of the casuary: the next, the male and female *musficapa striata*, from Hudson's Bay; and the *ampelis cristata*, from America. The sixteenth contains a very beautiful bird, the *Columba coronata*, from the Cape of Good Hope: and the two following, two species of Falcon, from Tierra del Fuego and Greenland. In the nineteenth, is by much the best representation of the hyæna that we have seen; and a coloured print of the black wolf, from Hudson's-bay. The *viverra tetradactyla*, from the extremes of Africa, is the only ornament of the twentieth plate; but in the twenty-first, are three little birds from North America, the *parus Hudsonicus*, the *fringella Hudsonica*, and the *emberiza leucophrys*. In the twenty-second is a bird of the heron kind, which, from the shape of its bill, we have called the spoon-bill, the *platalea leucorodia* of Linnæus, remarkable for building its nest in trees. In the twenty-third and thirty-fourth tables, are two species of penguin, the *aptenodytes Patagonica* and *Magellanica*. These birds recal strongly Sir John Narborough's description. He says they appear like children, with bibs pinned before them. This appropriated language, from strong first impressions, is often highly valuable; and its expressive brevity is equally striking, in a groupe of these animals, in the tail-piece.

The twenty-fourth plate exhibits the *cuculus indicator*, from the Cape of Good Hope, the little bird which conducts the traveller to the hoarded treasure of the industrious bee, by first attracting his notice, and then hovering over the spot with expressive cries. It cannot obtain the honey by its own efforts, and is therefore contented to share the plunder with a more powerful ally. These birds are often highly useful in such un-  
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frequented deserts, as they furnish a palatable addition to the slender diet of the traveller. In the same plate is a print of the *fringilla cyanocapilla* from Senegal.

The twenty-fifth plate shews the *brucea antidyenterica*, a species of a new genus from Africa, used by the natives as a specific against the dysentery. The next is a new species of testudo called *fulcata*, from the West Indies; the shell is beautifully variegated; and the following object is the Chinese wild man. We recommend the animal to the attention of lord Monboddo; but, if we can trust general habits and appearances, it is of the monkey race. Its arms, particularly, reach far below its knees: it is, however, classed by our author under the genus *HOMO*.

The twenty-eighth plate represents that species of falcon, so useful at the Cape of Good Hope, called *serpentarius*, from its feeding on serpents. The following plate exhibits a new species of *psittacus*, called, from its native haunts, *Guinienfis*. Two birds from India, and one from South America, fill the twenty-ninth plate. The first is a new species of the minute *trochilus*, from its voracity called *gularis*. The second is a new species of *fringilla*, called *torquata*; and the last, which is also new, is the *motacilla gularis*.

The *jerboa Capensis*, from the extremity of Africa, is a new genus of the fourth class of Linnæus. It is a beautiful animal, the insides of whose ears are of a vivid pink colour. The next object is a new species of lemur, the *l. bicolor*; and the next a new one of the *otis*; the first is from South America, and the second from India. The two last plates of the sixth Number represent two new species of *ardea*, from South America, the *a. nævia* and *torquata*.

We have thus given a short description of the different subjects in this work, with a few remarks to point out their nature. It will be readily observed, that the species delineated are generally new, and frequently important. When they were before known, those chiefly are selected, which had not been hitherto engraven with sufficient accuracy. It will be obvious, that if the same care be employed in the progress of the work, it will become very valuable; and the cost, though great, be repaid with considerable information. At present, from the number of African animals, it is an useful addition to Sparrmann's Voyage; and we suspect, in the prosecution of it, that it will no less assist the different narrations of captain Cook. At the same time, it will be a monument of skill and knowledge, of which an Englishman may be justly proud; because it is the work of his countryman, because it is yet unrivalled, and probably will remain without an equal.



*A Biographical Dictionary, containing an historical Account of all the Engravers, from the earliest Period of the Art of Engraving to the present Time; and a short List of their most esteemed Works. With the Cyphers, Monograms, and particular Marks, used by each Master, accurately copied from the Originals, and properly explained. To which is prefixed, An Essay on the Rise and Progress of the Art of Engraving, both on Copper and on Wood. With several curious Specimens of the Performances of the most ancient Masters. By Joseph Strutt. Vol. I. 4to. 1l. 1s. in Boards. Faulder.*

**I**N England, the art of engraving is much cultivated, and its artists now excel those of every other country; yet we have still wanted a satisfactory account of the engravers, or their works, in the English language.

‘ In France (we are informed) the example has been set us by Basen, who, with the assistance of the notes of M. Mariette, has given us a regular account of upwards of a thousand artists. It is a very ingenious compilation, and, as far as it goes, exceedingly useful. The descriptions which he gives of the prints belonging to each artist are very accurate, and the observations which occur, are no small proofs of the solidity of his judgment; but he has generally omitted to inform us of the style or manner in which they are worked: neither has he given us the marks or monograms, which they often substituted instead of their names; and these omissions render his work much less valuable than it would otherwise have been, because it affords us but little assistance in distinguishing the works of one master from those of another of the same name, or who might use the same mark.

‘ The other foreign publications upon the subject, though very multifarious, are, nevertheless, exceedingly defective; few of them speak of the art of engraving abstractedly; and the greater part of them are little more than unsatisfactory catalogues of the names of the artists, or lists of their works, without any proper description. If professor Christ had paid a sufficient attention to this particular, his Dictionary of Monograms would have afforded infinitely more assistance in distinguishing the works of the old masters, the one from the other; though it is confessedly, as it stands, a very desirable performance. In English, we have Evelyn’s *Sculptura*; a small book entitled *Sculptura Historico-Technica*, compiled originally by the elder Faithorne; and the *Series of Engravers*, published at Cambridge: these, excepting catalogues of particular masters works, are all the books I can recollect of any consequence, in which the artists are generally spoken of (for Virtue’s Catalogue of the Engravers, published by the hon. Mr. Walpole,

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is confined to the English school only ; and that they are very defective, a small degree of examination will abundantly prove. I need not say how expensive it would be to purchase all the publications, which bear any reference to the art of engraving ; but I fear, the information to be gained, from the far greater part of them, would be neither adequate to the cost, nor the study which must necessarily be bestowed upon them.'

The title of the work sufficiently explains its form, which is well adapted to the author's design. A system of the art might have been scientifically arranged ; but the lives of the artists require no such fetters, and they would lessen the utility of a work of this kind, which is rather to be referred to than read. A chronological table is, however, intended to be placed at the end of the second volume, with a list of the disciples of each master.

' Nearly three thousand names are included in the narrow limits of this work ; the lives of the artists must, of course, be drawn up in as short a compass as possible. I am well aware of the dryness of a mere Dictionary history, as also of the frequent repetitions which must necessarily occur ; and I have endeavoured to compensate for these defects, by a diligent attention to truth : at the same time, whenever I could meet with an interesting anecdote to enliven the performance, I have gladly inserted it. But so many of the engravers lived and died in obscurity, that little, very little matter of amusement, exclusive of the arts, can be gathered from the barren soil. These unfavourable circumstances will not, I hope, be placed to my account, even when it appears, that I have chosen rather to leave the subject naked as it is, than to adorn it in a more pleasing manner, at the expence of veracity.

' With respect to the general character of each artist, I have written as an engraver, and endeavoured, as clearly as possible, to point out the style in which he worked, and wherein his great excellence consisted ; and upwards of twenty years experience may, perhaps, plead a little in favour of my judgment. I have constantly, however, endeavoured to deliver my sentiments in the most impartial manner : and if I am in any instance thought to speak too highly in favour of the artist, I hope to claim some small share of indulgence, because I constantly speak as I feel, and never presume to give my opinion positively, without adding the reasons upon which it is grounded.'

So far as this work has gone, the judicious author has fulfilled his promises ; and we receive it with more pleasure, since we are very sensible of the difficulties which must have attended the execution. The several engravers, in this volume, appear to us very accurately characterized ; and where their life has admitted of introducing any entertaining circumstances, out

of the line of their profession, they have been properly inserted. As a specimen of this kind, we shall transcribe the Life of John Blagrove.

‘ John Blagrove, born      Died, 1611. An excellent mathematician. He was the second son of John Blagrove, of Bulmarsh-Court, in the county of Berkshire. The former part of his education he received at Reading, from whence he removed to St. John’s college, Oxford. When he quitted the university, where he did not long reside, he retired to Southcote-Lodge, and devoted his time to study, his genius chiefly leading him to the science of mathematics. He also reduced his studies to practice, and gave to the public the fruit of his labours. He was a man of a benevolent disposition; and his judicious charities are still remembered at Reading with gratitude. One especially is too singular to be omitted in this place. Annually, on Good Friday, he appointed the church-wardens of the several parishes in that town, to choose three maidens of fair character, each of which had lived three years in her place, and to bring them to the town-hall, where, before the mayor and aldermen, they cast dice; and she who is so fortunate as to throw the highest number, is presented with a purse containing ten pounds, and attended by the other two maidens who lost the cast. The year following, the maidens, who lost the cast the year before, come again, with a third added to them, and throw again. But if any one is so unfortunate as to lose three throws, she cannot cast a fourth time, but is excluded from the benefit of the charity. Mr. Ashmole, who gives a full account of this custom, adds: “it is lucky money; for I never heard, but that the maid that had the ten pounds suddenly got a good husband.” Mr. Blagrove died at his house near Reading, August 9, 1611, and was interred, near his mother, in the church of St. Lawrence, in that town. His principal works are the following: a Treatise on the making and using the Familiar Staff. The Astrolabium Uranicum generale. The Art of Dalling, and the Mathematical Jewel. This last is his greatest and most esteemed performance. It was printed in 1585, at London, with this note in the frontispiece: “By John Blagrove of Reading, gentleman, and well-willer to the mathematics, who hath cut all the prints or pictures of the whole with his own hands.” They are wooden cuts, and neatly executed. Where he has not put his name at length, it is thus abbreviated, “J. Blag. sculp.”

As a specimen of his characters of the style of engravers, we shall select the following account of that of Cornelius Bloemart.

‘ The manner of engraving, adopted by this excellent artist, appears to me to be not only quite original, but the source from  
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which we may trace that style, in which the greatest and best French masters excelled: those I mean, who worked with the graver only. He covered the lights upon his distances, and the other parts of his plates, which required tinting, with great care. The lights, whether on the distant hills, trees, buildings, or figures, in the engravings prior to his time, had been left quite clear, and by so many white spots scattered, in various parts of the same design, the harmony was destroyed, the subject confused, and the principal figures prevented from relieving with any striking effect. By this judicious improvement, Bloemart gave to his prints a more clear and finished appearance, than all the laboured neatness even of Jerom Wierix had been able to produce.

‘ He drew correctly; but from his style of engraving, which is executed entirely with the graver, the extremities of his figures are heavy; and his heads are not always equally beautiful or expressive. With respect to the mechanical part of the works, few indeed have excelled him, either in clearness or freedom of execution. His great fault, however, is want of variety. The naked parts of his figures, the draperies, and the back-ground, are equally neat, and engraved precisely in the same manner. Hence the effect is flat, and the flesh, for want of sufficient distinction, appears cold and silvery. His works are justly held in high estimation.’

In other parts, he inserts useful cautions to collectors, which may be attended to with advantage. Speaking of the works of Scheltius a Bolswert, he observes,

‘ It is very necessary to caution the collectors of this master’s works (those especially who are not very conversant with them), that many of them have been copied in a very careful manner, so as easily to deceive the unskilful. Some of these copies, as the Marriage of the Virgin, from Rubens, &c. are by Lawers. But those which are most likely to mislead are by Ragot, a French engraver, employed by Mariette the print-seller, who frequently meeting with the reverses or counter-proofs, from the prints of Bolswert, gave them to the engraver; and he imitated them with the utmost precision. By this means the impressions from the plate copied come upon the paper the same way with the original. It is true, his name is usually affixed at the bottom; but it is often cut off, and then the copy is not easily distinguished from the original. Among other prints thus imitated by Ragot from Bolswert, is Christ crucified between the two thieves; where the soldier is represented piercing his side, from Rubens.’

At the end of the volume is a very full collection of engravers marks and monograms, with an Essay on the Art of Engraving, and some observations on the subject, by another



hand. We entirely agree in this ingenious author's opinion, that of all the imitative arts, engraving is most applicable to general use. Prints, from the facility with which they are multiplied, have a great advantage over paintings. Many of the best paintings of the early masters have been executed on walls, or deposited in damp unfrequented buildings; while a print, with common care, passes unhurt from one collection to another. In England, where capital performances of the ancient masters are very scarce, we are much indebted to prints for giving us proper ideas respecting their merits. As far as design, composition, and drawing, are concerned, a print is equally estimable with a picture; and if the painter was a bad colourist, as was the case with Peter Testa, the print gives him a reputation, which, on account of that defect, he never would have acquired from the picture. 'What printing has been with respect to general science, engraving has been to the arts; and the works of the old Italian masters will be indebted to engraving for that perpetuity which the invention of printing has secured to the Jerusalem of Tasso, and the tragedies of Shakspeare and Corneille.'

Mr. Strutt very accurately examines the different evidences in favour of Italy and Germany, in respect to the invention of engraving plates for impressions, and concludes that there is the greatest reason to believe, that the art was practised in Germany before it reached Italy. It did not appear in Italy before the year 1460; while it may, with the greatest justice, be placed ten years earlier among the Germans. The author is of opinion, that the art was practised in its infancy, in our own country, of which he produces a specimen, together with several other plates, either originals, or copies from the oldest masters.

This volume finishes with the letter G, and abounds with information, superior to any work we have seen on the same subject. We hope that the author will complete his design, so soon as the great attention and care, necessary for the purpose, will permit. In the prosecution of it, we would advise him to write *aqua tinta*, instead of *aqua tinto*, which is a vulgarism much beneath a writer of his rank.

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*Philosophical Transactions of the Royal Society of London. Vol. LXXV. For the Year 1785. Part I. (Concluded, from p. 59.)*

**A**RTICLE XI. Observations and Experiments on the Light of Bodies in a State of Combustion. By the Rev. Mr. Morgan.—The experiments and conclusions of Mr. Morgan are

are very ingenious. As it seems now to be generally acknowledged, that light is a body, consisting of different parts, capable of becoming a component part of other bodies, and of being separated by a superior attraction, Mr. Morgan examines the phenomena of combustion, to ascertain the manner of its separation. It appears, from this enquiry, that the most refrangible rays are decomposed with the least heat, and the least refrangible only with a greater; but besides the mere power of heat, there are other modes of retarding or accelerating the combustion of bodies.

‘ 1. A candle burns most rapidly and brilliantly in dephlogisticated air.

‘ 2. The blue column of a sulphureous flame in pure air is changed into a dazzling white.

‘ 3. The flame of inflammable air, when mixed with nitrous air, is green. It is white strongly tinged with the indigo and violet when mixed with common air; but when mixed with dephlogisticated air, or surrounded by it, the brilliancy of its flame is most singularly beautiful.

‘ If the preceding facts prove that light, as an heterogeneous body, is gradually decomposed during combustion; if they prove, likewise, that the indigo rays escape with the least heat, and the red with the greatest; I think we may rationally account for several singularities in the colours of different flames. If a piece of paper, impregnated with a solution of copper in the nitrous acid, be set on fire, the bottom and sides of the flame are always tinged with green. Now this flame is evidently in that weak state of decomposition, in which the most refrangible rays escape in the greatest abundance; but of these rays the green escaped most plentifully through the unignited vapour, and that portion of the atmosphere which separates the eye from the flame. The peculiarity which I have now endeavoured to account for may be observed in the greatest perfection in brass foundries. The heat in this instance, though very strong, is scarcely adequate to the decomposition of the metallic vapour which escapes from the melted brass. A very singular flame, therefore, appears to the eye; for while its edges are green, its body is such as to give the objects around a very pallid or ghastly appearance, which is the consequence of its wanting that portion of red rays which is necessary to make a perfect white.’

Many other singularities, in the appearance of flame, are examined and explained on the same foundation, with equal ingenuity.

The appearances of electric light next claim Mr. Morgan's attention. Every fluid or solid body may be made luminous by the passage of electric light; but the difficulty of making  
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any body luminous is greater, the more powerful that body is as a conductor, or the more its density is increased. Again, the brilliancy and splendour of the electric fluid, in its passage through any body, are increased by lessening the dimensions of that body; and the influence of different media, on electric light, is analogous to their influence on solar light. These several positions are elucidated by decisive experiments. The conclusions from them are equally ingenious; but they would not be easily intelligible without the experiments, so that we must refer to the volume.

In the observations on phosphoric light, Mr. Morgan objects to Mr. Wilson's opinion, that it proceeds from a slow combustion; and, with more reason attributes it to the light of the sun not being immediately reflected, but to its being retained with some force, though not actually absorbed. In fact, the phosphoric light is nearly in the same state with heat, which, when added to a body, and not combined with it as a component part, gradually escapes. As some bodies receive heat by exposure to it, into their composition, without allowing it to escape, so some metallic calces are changed in consequence of exposure to light. Again, phosphoric light is sometimes separated by heat, but not attended with any additional heat; and, in this case, we approach more nearly to Mr. Wilson's opinion of its being a mode of combustion. But we must not indulge ourselves too much in these reflections.

Art. XII. On the Construction of the Heavens. By William Herschel, Esq. F. R. S.—The magnitude of the objects, the vast distance, and amazing extent of the fields of view, mentioned in this paper, fill the mind with ideas so immense, that it is lost in the contemplation; and, when we endeavour to pursue them in imagination, we often lose sight of the whole. We have frequently experienced this obscurity in reviewing Mr. Herschel's researches: we now feel it with additional force; so that we fear our account of this paper will appear imperfect and obscure. We cannot enter on it at any length; for then our article must equal the original.

A reader of Mr. Herschel's works must possess a lively imagination, and a clear ready comprehension: he must forget his former ideas of fixed stars being scattered in parallel planes; and must learn to conceive as many different inclinations of them, as there are varieties of *nebulæ* or systems.

At page eighteenth of the last volume, we gave some account of the author's first paper on this subject. He now pursues his former reasoning. The groups, he supposes, may be formed by the laws of attraction: if we originally suppose the stars scat-



scattered regularly, some larger star will attract the neighbouring smaller ones, and their united power will contribute to increase the number; so that distinct nebulae will be formed, each of which will comprehend a great number of stars. The nebulae will be varied in form, from the size of the stars, their original vicinity, and other circumstances; and, when these become numerous, vacant spaces will consequently be left. This theoretical view is very consonant to what really appears; and the agreement is so striking, that it must be very near the truth. In this theory, Mr. Herschel considers a projectile force as originally impressed on these bodies, to avoid the objection, that if this account were true, we know of no power which could impede their falling into each other. We see afterwards reason to think, that this sometimes happens. If we suppose the distance of a star of the first magnitude to be unity, one of the second as at twice the distance, and so on to the seventh, the smallest star that we can, even with common assistance, perceive,

‘—It follows, that an observer, who is inclosed in a globular cluster of stars, and not far from the center, will never be able, with the naked eye, to see to the end of it: for, since, according to the above estimations, he can only extend his view to about seven times the distance of Sirius, it cannot be expected that his eyes should reach the borders of a cluster which has perhaps not less than fifty stars in depth every where around him. The whole universe, therefore, to him will be comprised in a set of constellations, richly ornamented with scattered stars of all sizes. Or if the united brightness of a neighbouring cluster of stars should, in a remarkable clear night, reach his sight, it will put on the appearance of a small, faint, whitish nebulous cloud, not to be perceived without the greatest attention. To pass by other situations, let him be placed in a much extended stratum, or branching cluster of millions of stars, such as may fall under the third form of nebulae. Here also the heavens will not only be richly scattered over with brilliant constellations, but a shining zone or milky way will be perceived to surround the whole sphere of the heavens, owing to the combined light of those stars which are too small, that is too remote to be seen. Our observer’s sight will be so confined, that he will imagine this single collection of stars, of which he does not even perceive the thousandth part, to be the whole contents of the heavens.’

All this very nearly agrees with actual observations: the different kinds of nebulae are observed in the forms here theoretically pointed out; and, instead of an imaginary description, it seems actually copied from nature. The nebula which

we inhabit appears, from the results of the table of star-gages, to be of the third kind, a very extensive *branching compound* congeries of many millions of stars. The section of the heavens, delineated in the plate, is drawn on a scale, in which the distance of Sirius is  $\frac{1}{80}$  of an inch; and, in this scale, all the stars which we see in the finest nights may be comprehended within a circle of less than  $\frac{1}{8}$  of an inch radius.

It is impossible to follow the very wonderful phænomena which Mr. Herschel points out. He then proceeds to enumerate the different nebulæ, and to consider their distance. In this respect, there must be necessarily much doubt. Some of these seem not to be at less than six or eight thousand times the distance of Sirius. All these circumstances, though apparently so astonishing, rest on a better foundation than many of the theories implicitly believed by mankind.

The paper concludes with an account of some nebulæ, which are called planetary. The edges are well defined; but they preserve their brightness, with very high magnifying powers: they are not bright enough for single stars, and too much so for comets in their aphelion. Mr. Herschel seems to suspect, that they may have arisen from nebulæ, which, in consequence of various changes, may have rushed together, and been destroyed; but he purposes to examine them more particularly.

Art. XIII. Remarks on Specific Gravities taken at different Degrees of Heat, and an easy Method of reducing them to a common Standard. By Richard Kirwan, F. R. S.—This article cannot be abridged, because its utility consists in tables, which we cannot transcribe. The title explains its import; and it is executed with great accuracy and ingenuity.

Art. XIV. Electrical Experiments made in Order to ascertain the non-conducting Power of a perfect Vacuum, &c. By Mr. William Morgan—The non-conducting power of a perfect vacuum is in this article well ascertained, by the author's having produced one more perfect than we have yet known. When the air is rarefied it becomes a conductor, though, in its common state it is no longer so. Mr. Morgan's ingenuity and knowledge of nature would enable him to pursue this subject with advantage.

Art. XV. Experiments and Observations relating to Air and Water. By the Rev. Joseph Priestley, LL. D. F. R. S.—Dr. Priestley deserves as much praise for candour, as for his abilities. The experiments before us are a valuable supplement to those of M. Lavoisier; though there seems to have been a  
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little difference in the memoir transmitted to Dr. Priestley, from that which was published.

Iron melted in pure air, by a burning lens, was found to absorb the air almost entirely; the remainder was fixed air, and the iron was reduced to a calx; it increased in weight in proportion to the air absorbed. On reducing it, the increased weight disappeared, and the inflammable air lost was exactly the quantity sufficient to saturate the pure air which had originally disappeared; that is, it was enough to have completely exploded together. The additional weight which the iron had lost, however, appeared in the form of water, that covered the sides of the vessel in which the experiment was made. The remaining air was inflammable. The experiment succeeded also in Dr. Priestley's hands with copper and mercury, though M. Lavoisier's experiment with the tube of copper failed. We must, therefore, wait for farther information on this subject.

In other experiments, Dr. Priestley found that water was essential to the production of inflammable air. He was not aware that iron and charcoal, when intensely hot, had so strong an attraction for water, that 'they would attract it in the midst of the hottest fire, and through the pores of a retort.' He repeated his experiments, and saw that both substances only produced this air in consequence of water being accidentally present.

Though Dr. Priestley agrees with M. Lavoisier in the result of his experiments, he differs in the conclusion drawn from them. He still contends for the existence of phlogiston in inflammable air; though with both English and French chemists he seems to allow, that water is produced by the union of these kinds of air. In his experiments for this purpose, which were made with steam transmitted through charcoal, the inflammable air was united with fixed air, and the latter was often so accurately combined with the former, that it appeared only after decomposition. It seemed probable too, from the quantities expended, compared with the air procured, that it came rather from the other materials than the water. It was somewhat better established by the experiments with iron. We shall add Dr. Priestley's theory of the changes produced by these experiments, on the supposition that phlogiston really exists.

' Since iron gains the same addition of weight by melting in dephlogisticated air, and also by the addition of water when red-hot, and becomes, in all respects, the same substance, it is evident, that this air or water, as existing in the iron, is the very same thing; and this can hardly be explained but upon the supposition that water consists of two kinds of air, viz. inflammable



flammable and dephlogisticated. I shall endeavour to explain these processes in the following manner.

'When iron is melted in dephlogisticated air, we may suppose that, though part of its phlogiston escapes, to enter into the composition of the small quantity of fixed air which is then procured, yet enough remains to form water with the addition of dephlogisticated air which it has imbibed, so that this calx of iron consists of the intimate union of the pure earth of iron and of water; and, therefore, when the same calx, thus saturated with water, is exposed to heat in inflammable air, this air enters into it, destroys the attraction between the water and the earth, and revives the iron, while the water is expelled in its proper form.'

Some other curious experiments are added, which seem to support the English theory, in opposition to that of M. Lavoisier; but we cannot particularly relate them. Dr. Priestley concludes this curious paper with a hint 'that some important discoveries are nearly within our reach.' May this prophecy soon be realized!

*The New Dispensatory. By William Lewis, M. B. F. R. S. The Fifth Edition, carefully revised and corrected. 8vo. 7s. 6d. Nourse.*

*The Edinburgh New Dispensatory, containing Elements of Pharmacy, &c. the two latter Parts comprehending the Preparations and Compositions of the last London and Edinburgh Pharmacopœias; being an Attempt to collect and apply the later Discoveries to the Dispensatory, published by Dr. Lewis. By Gentlemen of the Faculty at Edinburgh. 8vo. 7s. 6d. Elliot, Edinburgh; Robinsons, London.*

THE appearance of a new edition of Dr. Lewis's Dispensatory, at the same time with an attempt to improve and amend it, has led us to compare these new publications with that on which they are formed. It would be useless and impertinent to enlarge on the original plan; for it is our present business only to examine the improvements: indeed the medical world has already decided on the merits of the former editions; and Dr. Lewis has gained, by his work, a very extensive reputation.

In the interval between the appearance of the second edition, for that was greatly improved by the author himself, and the present time, chemistry has almost become a new science; many articles have been added to the materia medica; several foreign Dispensatories have appeared with great applause; and the Edinburgh college have published two very improved editions

tions of their own. We may take this opportunity of informing physicians, that there is reason to expect a new one, from the college of this kingdom. It is indeed to be regretted, that pharmacy has not shared the same attention as chemistry; nor has it been examined with the indulgent fondness which has distinguished the other branches of the science; yet we certainly owe to the labours of chemists a more intimate acquaintance with the nature of metals, and a more exact mode of preparing metallic remedies: we more clearly understand the nature of vegetable and animal substances; and, in a few instances, have enlarged our knowledge of their respective menstrua. Many new articles of the materia medica are indeed already almost forgotten, and some cannot yet be procured; but, in a system of this kind, it is necessary that they should be mentioned, and the little information which we can obtain should be communicated.—From the foreign Dispensatories much knowledge can be procured. The best of these, the Wurtemberg Pharmacopœia of 1771, whose authority is very extensive through Germany; the Russian, the new Brunswick, and the late Swedish Dispensatories, might have contributed useful assistance to the present plan. We are sorry to observe that our editors have overlooked, or not been able to procure them. The omission perhaps is rather to be lamented than censured.

The conduct of these different improvers, in the latter parts of the work, is nearly the same. The alterations in the last, are those only of the Edinburgh Dispensatory; and the former professes to ‘*correct* the formulæ’ from the same work. But, while the promises of the first seem to have been punctually, those of the last have been carelessly, executed. The new formulæ are not added, and few marks of correction occur.

In the Materia Medica, (we choose a retrograde order, since these works diverge from each other in this direction), the additions to each are numerous; and the new articles are nearly the same; the sources from which they are transcribed are also not very different. In the London edition, however, the former remain unchanged; in that of Edinburgh, additions are freely interspersed: tables of mercurial and antimonial preparations are subjoined, as well as some articles which are not found in the other. These are the ‘*lactuca*’, one species of which, the *virosa*, has been recommended in dropsies; ‘*lichen islandicus*,’ ‘*nux vomica*,’ &c. On the contrary, neither the ‘*quercus marina*’ (sea wrack), or the *viola tricolor*, which have shared the attention of the London editor, are mentioned; and, though the title of the *salix* is found,

its real or imputed virtues are omitted. In the conduct of the articles, the botanical descriptions are very generally fuller in the London edition; though in each, the Linnæan names are mentioned: in this too they are longer, sometimes on account of the more diffuse style, sometimes occasioned by additional information. In this last respect, the articles of 'columba, colchicum, dolichos pruriens, œnanthe crocata,' and some others, are more valuable: those on the 'pulsatilla,' the 'quassia,' and the 'ricinus,' are, we think, less satisfactory, though farther extended.

The value of the Edinburgh edition is greatly increased by the chemical and pharmaceutical essays in the introduction, extracted from Dr. Webster's Syllabus: in this view it is unrivalled. The additions to Dr. Lewis are very numerous, and highly important. The chemical part is new, accurate, and satisfactory. One or two typographical errors of some consequence have, however, been overlooked; and two passages are marked with inverted commas, as new, though really copied from Lewis. These are trivial imperfections. The descriptions of the new furnaces, and the new table of elective attractions are very valuable; but they would require a plate to enable us to describe them.

From the new articles of the materia medica we can select no specimen; for they are very generally compiled from works pretty well known, and, except in one or two instances, are not very important: it would not have been difficult to have rendered them more useful. We ought, however, to add, that, though on old subjects, the account of the bark and opium, in the Edinburgh edition, are new. The botanical discoveries relating to the first, and the additional knowledge we have acquired of the last, since we have been less afraid of it, seem to require a new compilation. We must be allowed to wish, that the materia medica, in both works, had been fuller in the number of articles; and that the editors had not been confined by the limits of either college.

We shall select no specimen even from the part which we have said is almost wholly new; since its great merit consists in the very clear concise manner, in which subjects, well known to the chemist, are detailed; and we have little room for compilations, even of the greatest merit.—On the whole, after having made a careful comparison of these two works, we must recommend the Edinburgh edition, as the most useful companion and instructor. We cannot give it a higher character than to observe, that, in the present state of science, it is, what the original work was, at the time of its first appearance.







*A Key to the Mystery of the Revelation: whereby all its dark Meanings, being reduced to one regular System, are easily accounted for, and explained. 8vo. 4s. in Boards. Goldsmith.*

NO object of theological disquisition seems to have been more fertile of keys, comments, and expositions, than the Revelation of St. John. And indeed the mysterious nature of its contents, and those delivered in a style of the utmost solemnity and grandeur, afford a very natural and proper subject of enquiry to those divines, who have learning and leisure to pursue it. But whoever sits down with an intention of explaining the whole of this ænigmatical book, will probably miscarry in many points. Sir Isaac Newton says, that ‘among the interpreters of the last age, there is scarce one of note, who hath not made some discovery worth knowing, but that our greatest obligations are owing to three particularly, Mede, Vitringa, and Daubuz.’ But neither sir Isaac, nor, we suppose, any rational divine, has adopted all their solutions or conjectures. The learned bishop of Bristol, whose *Illustrations of the Apocalypse* deserve no mean share of credit among those of the present times, observes ‘that to explain it perfectly, is not the work of one man, or of one age; and probably that it will never all be clearly understood, till it is all fulfilled.’ Whoever undertakes to develop its mysteries with wisdom, sobriety, and reverence, will probably contribute some new light for our guidance, and merit the thanks of the serious part of mankind.

The anonymous author of the present publication tells us, in his introduction, that ‘he flatters himself he is possessed of the *happy clue*, which, he adds, was many years ago accidentally discovered to a friend. It is no more, he informs us, than the simple hint of considering these mysteries *as a regular series of ecclesiastical events, from the beginning to the end of time*, but yet variously expressed, agreeably to the seven parts into which they seem naturally to be divided.’ The author gives us to understand, that he has found, from many years experience, the great efficacy of this Key, or manner of explanation now offered to the public; and that it is astonishing to see such a heap of seemingly wild and jarring matters, so easily yielding themselves to order and arrangement, by so simple a means. We were led, by this declaration, to expect more satisfaction than we can confess ourselves to have found. The scheme itself is, however, far from wanting ingenuity; but its simplicity, which the author probably thinks its first recommendation, we are inclined to regard as its principal defect. A key, too simply constructed, cannot be applied with success to the



wards of a lock very intricately formed. But the author, without doubt, having conceived ideas very different from our own, of the machine he meant to open, lays just claim to approbation, for his sincere and earnest endeavours to effect a very laudable purpose.

After all, we are candid enough to allow, this method may carry conviction to other minds; and if it should not, that at least those discoveries which it has produced, may be of great use to other learned men who shall consider the same subject; and, united with preceding efforts, and the fullness of time, may contribute no contemptible share to the complete ecclaircissement of this august mystery. We, therefore, with this performance may fall into the hands of all such as are able and disposed to pay due attention to the subject.

Whatever the Protestant churches abroad, or those of the dissenters at home, may think of this author's scheme in general, we are apt to believe his idea of restraining what relates to Philadelphia, in the prophetic vision, so partially to the church of England, will appear, in their judgment, to want liberality, and perhaps draw upon him the imputation of bigotry; a charge from which, on this account, we cannot imagine him to stand entirely clear, even within the pale of his own church.

The comparison of the seven golden candlesticks in the Revelation, with the candlestick of Moses, consisting of a stem or shaft, and six branches, is ingeniously supported. Our readers may not be displeased to see the passage, which we shall lay before them, with a previous paragraph introducing the subject. There is on one of the letter-press pages a draught representing the candlestick of Moses, our omission of which, we do not apprehend, will create any difficulty to the attentive reader.

'The first thing to be considered in the above vision must be the representation of the seven golden candlesticks. In the midst of these was seen walking a glorious appearance of Christ, cloathed in all the pomp of majesty, as the great eternal high-priest of his people, both able and willing to avenge them of their enemies, and establish them in perfect peace and glory. These candlesticks are the seven periods or divisions of the church, and are made use of as a proper representation of religion, which is a strong burning light, illuminating the dark gloomy minds of erring mortals, and directing them in the way of endless peace and felicity.

'In order the better to illustrate the meaning of these candlesticks, we must compare them with that made by Moses, according to the express command of God. Though these are

represented as standing separate, and that of Moses as being only one; yet, upon a proper comparison, it will be found to have the same typical meaning and tendency, and to be explanatory of many particular terms used in these mysteries. The candlestick of Moses was to be made, with its several appendances, of a talent of pure gold, in the following manner. The middle part of it was the main shaft, or stem; from which proceeded six branches, three branches from one side, and three branches from the other side. The two lowermost, extending opposite to each other, were in a manner united by a knop, formed in that part of the shaft of the candlestick from whence they proceeded, directly under their connexion. Two more branches proceeded in the same manner above them, and two more still above these. Every one of these several branches had lamps fixed to their extremities, and on the top of the middle stem was likewise fixed a lamp.

‘The two lowermost branches, connected together with a knop, may signify the two several periods of the church before the law, here called the churches of Ephesus and Smyrna. The two other branches above them may represent the two churches under the law, called Pergamos, and Thyatira, and the two uppermost branches express the two Christian churches, called Sardis and Philadelphia. The middle stem, being as it were the parent of these branches, is the third Christian church, called here the church of Laodicea, and in other places of Scripture, the Great Church, as being that into which all the nations in the world will bring their glory and honour, as the prophets have every where loudly sung. We may now see the propriety of Christ’s walking in the midst of the seven candlesticks, he giving life and existence to them all, and, like the shaft of Moses’s candlestick, bearing and supporting all the rest. Thus we see, likewise, the unity of our most holy religion, which, with its several branches, forms one glorious system, that will blaze and flourish to the end of time.’

The metaphorical words *blaze* and *flourish*, at the conclusion, are not happily, indeed not properly, connected.

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*The Book of the Revelation of Saint John the Divine explained; In an historical View of the past and present State of the Christian World compared with the prophetic Visions. By Thomas Vivian, Vicar of Cornwood, Devon. 8vo. 2s. 6d. Dilly.*

AFTER the state of doubt and uncertainty in which we were left by the performance last reviewed, we were prepared to receive, without discontent, a much slighter degree

of satisfaction from the perusal of the present work on the same difficult subject, than we gratefully acknowledge it has given us.

This explanation evinces its author to possess no ordinary share of abilities, either natural or acquired; and he appears to have conducted his important undertaking in the true spirit of a Christian divine. Judgement, candour, and moderation, accompanied by a discerning and temperate spirit of conjecture, seem jealously to have watched his footsteps through the sacred labyrinth, and to have enabled him, from extensive reading and erudition, to form a more successful clue than perhaps any preceding adventurer. It gives us pleasure to see this work, as its dedication announces, under the patronage of the author's diocesan, the bishop of Exeter. Its intrinsic merit, though it may not need such a recommendation, at least deserves the credit it will be thought to derive from this circumstance.

Mr. Vivian divides his exposition into seven chapters, which are preceded by a short introduction, shewing the design of the sacred book, and the importance of the subject; and are followed by ample annotations, equally instructive and entertaining.

The plan of the work will be sufficiently conveyed to our readers by the heads of the several chapters, which are as follow.

Chap. I. Containing the Seven Epistles to the Seven Churches of Asia, under the Inspection of St. John; in which are Directions, Reproofs, and Consolations, suited to their different States.—Chap. II. Containing under Seven Seals, opened one after another, the prophetic History of the primitive, pure, and rising Church of Christ: a Period, extending from the Delivery of the Prophecy to the Reign of Constantine, about Two Hundred and Forty Years.—Chap. III. Containing the History of the Christian Church, now delivered from the persecuting Pagan Emperors, but departed from the Simplicity of the Gospel. This Period extending from Constantine, and not yet compleated, is described under Seven Trumpets.—Chap. IV. Exhibiting a permanent View of the internal State of the Christian Church, during the Period of the Seven Trumpets. Here the Contests between the purer and more corrupt Parts are described under Seven Contemporary Visions. As this Part differs from the rest of the Book, it is distinguished by the Title of The Little Book.—Chap. V. Of the Seven Vials to be poured out hereafter on the apostate Part of the Christian Church, and putting an End to the  
Apo-



Apostacy. This Period will not begin till the Seventh Trumpet sounds, and will probably end at the same Time as the Visions of the Little Book, about the Year 2000.—Chap. VI. Of the Millenium, or the Reign of Christ during the Seventh Millenary of the World, or from the Year 2000 to 3000. After which follows the Resurrection and last Judgment.—Chap. VII. The Glory and Happiness of Heaven, to continue for ever.—The Conclusion.'

As a Specimen of the author's style, which we think excels in point of perspicuity and neatness, we subjoin his seventy-fourth annotation on the concluding verse of the Apocalypse; it being difficult, within our limits, to detach such a portion of the text as would, by itself, be clear and intelligible; besides that we are warmly disposed to recommend the whole to the serious perusal and attention of the public.

'*Be with you all, Amen.*] On looking back on the visions in this Book, and comparing them with the History of the Christian church, one Reflection seems very natural. Let us suppose that St. John had as clear a view of the events that were to befall the church, when he wrote this book, as we have now by the records of history. Let us suppose that he knew the Christians would be persecuted for the two next centuries, and then gain an establishment under the Christian emperors; together with all the circumstances attending these facts, which we now read in the annals of those times. Let us suppose that he knew perfectly the ravages of the northern nations; the religion of Mahomet, enforced by arms; and the devastations of the Turks. Let us suppose that he knew that a Christian bishop should rise to such a degree of power as to be the tyrant of the church, a promoter of idolatry and various superstitious ceremonies, and a persecuter of them that adhered to the word of God. In a word, let us suppose that he knew as much of the then future history of the church as we know now. Let us farther suppose that he meant to describe all he knew, under a series of prophetic visions, and that with so much clearness as to convince an attentive reader, that he really had such a knowledge of future events, given him by God, for wise purposes.

'Now, supposing all this, it may be asked, could he have executed his design more effectually, and with greater beauty and propriety, than is done in this book?

'For objects in vision, expressive of future events, he would naturally have recourse to the history of the Old Testament, and the circumstances of Jewish worship: for this language had already been adopted by the old prophets, and by the

Christian teachers. He would represent conquerors by war-horses; a destroying enemy by locusts, a burning mountain, or the sea and rivers bloody: the agency of invisible spirits, by Michael the tutelar angel of Judea; or by a serpent or dragon, when he would express the invisible enemies of God's people. As the Jewish church was known by the name Daughter of Zion, it would be natural to signify the Christian church also by a woman; in whom the dress and other circumstances would be expressive either of its purity or corruption; a state of persecution, or worldly prosperity. The active members both of the pure and the corrupt church, would naturally be styled prophets; these being the chief directors of old, both in the pure church at Jerusalem, and in the idolatrous part that worshipped the golden calves at Bethel.

' In a word, were a Jew converted to Christianity to describe, in prophetic language, the future history of the Christian church, made known to him by Revelation, it would probably be just such a composition as this of St. John. The visions would follow in the same order of time as the events were to happen; as is really the case, according to the account given of the book in this exposition: a circumstance in which it differs from all the expositions known to the author.

' And as different actions done at the same time must be related separately, in order to distinguish visions representing contemporary events, from those that described such events as were to follow one another in point of time; this difference might be pointed out by placing the contemporary visions in a separate part, or Little Book.

' This would probably be the case, supposing the writer to have a distinct view of future events, and to be left to himself to describe them in visions and prophetic language. But in fact the case was somewhat different. The writer seems really to have seen the visions which he describes, some on the land, some on the sea, others in the air or heaven, while he was in Patmos. And we cannot conceive any visions better suited to express the events. He described what he saw, and probably might not know himself all that was meant thereby. For he seems to have written all he knew, except in the case of the Seven Thunders, in the tenth chapter, where he was forbidden to write what he heard. Neither this nor any other prophecy is of private suggestion, proceeding from a man's own will or imagination; but holy men of old spake as they were moved by the Holy Ghost: searching what manner of things and times the spirit that was in them did signify.

' Thus

‘ Thus considered, the Revelation has in itself evident proofs of its divine authority. Indeed this, and some other parts of Scripture, that foretel things lately fulfilled, or now fulfilling, have, with respect to us, an increasing evidence of their authority. For when we see events in such a variety of instances corresponding to descriptions, which we know were written many ages before the events happened, and there being not one vision but what admits a fair application (except those which from their place in the book, and other circumstances, are judged to foretel events not yet come to pass) we find ourselves obliged to own, that no man could write this book unless God was with him.’

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*A View of the great Events of the Seventh Plague, or Period, when the Mystery of God shall be finished. Rev. x. 7. By Robert Ingram, A. M. 8vo. 3d. Robinson.*

THE leading idea of this pamphlet is, that the mystery of God, under the seventh trumpet, shall owe its accomplishment to the conversion of the Jews. ‘ The Jews, says the author, when they are converted and restored again to their own land, out of an abhorrence of themselves for their late crime, (Ezek. xxxvi. 21.) and to obliterate it as much as possible, and that they may even outdo the Gentiles on this occasion, will be more remarkably zealous and diligent than ever any people were before, in converting all nations to the Christian faith.’ This active and zealous spirit will, according to the author, excite against them hatred, persecutions, and wars, on the part of many of the princes and potentates of the world, who will look upon them as forming conspiracies to overthrow their ancient establishments of civil, as well as religious polity. The cruel treatment they must experience in consequence of this jealousy and hardness of heart, will drive them from one nation and people to another, till at length they shall have carried the light of the Christian revelation to every part of the earth. Those nations or individuals who, after all overtures for their conversion, shall remain obdurate, and turn a deaf ear to the voice of divine truth, as well as that grand corrupter of it, the church of Rome, who shall refuse to be reformed, will at length, though probably at periods of time somewhat successive, draw down that vengeance of the Almighty, represented to St. John, by the seventh angel pouring out his vial into the air, *when* there came a great voice out of the temple of heaven, from the throne, saying, *it is done.* And there were voices, and thunders, and lightnings; and there was a great earthquake, such



as was not since men were upon the earth ; and the great city was divided into three parts ; and the cities of the nations, and great Babylon, came in remembrance before God, to give unto her the cup of the wine of the fierceness of his wrath, &c. Rev. xvi. 17, 18, 19.

There appears little novelty in Mr. Ingram's View of the Seventh Plague, except his idea of its being brought down on the unconverted and unreformed part of the world, in consequence of their persecutions of the enlightened Jews, and their rejection of the Gospel at the hands of these zealous proselytes. This idea is supported on no improbable interpretation of several texts adduced by the author, both from the Old and New Testament.

Mr. Ingram considers this performance as completing and adding confirmation to *An Explanation of the Seven last Plagues*, which he lately offered to the Public.

*Letters concerning Education : addressed to a Gentleman entering at the University. By Peter Williams, M. A. Chaplain of Christ-Church College, Oxford. 8vo. 4s. Rivington.*

A Young man, just set free from the restraints of the earlier scenes of education, and entering at the university, warm with all the vivid affections of that blooming season of life, exulting in his consciousness of new enlargement and liberty, is not a little obliged to any sincere and intelligent monitor who may offer him advice at this most critical period. His future character, happiness, and estimation in the world, will ever greatly depend on, if they be not generally fixed by his conduct during this stage of his education. The Letters before us are meant, and indeed appear well calculated, not only to direct the first outset, but to regulate each progressive step from his entrance on the academic walk to its termination on the confines of a perilous world.

Our author does not profess to amuse his correspondent with novelties, to suggest any unheard-of plans of study, or recommend any change in academic discipline or customs, (we accuse him of no want of respect for the established modes), but his chief design is to advertise the young student of every thing that will be required of him in the course of his studies, and to encourage his literary pursuits, and the performance of all his duties, by friendly and affectionate admonition. The author has made a frequent, but discreet use of the thoughts of Bacon, Milton, Locke, Harris, Monboddo, and other writers on learning and education, and he has been profuse in his quotations from the ancient Greek and Latin classics, almost

most to a degree of pedantry ; unless we suppose, what perhaps in candour we ought, that, as all these passages are untranslated, they were meant to give some exercise to his young correspondent, and, now they are published, to other readers in the same situation. These passages are selected with judgment, and are generally such as the classic scholar cannot but receive with prepossession, and consequently with advantage to the author's probable intention. We do not advance the slight intimation we have given of the want of originality in these Letters, with the least tone of cynical fastidiousness ; for the earnestness, good sense, knowlege, and perspicuity, with which they are written, must claim our unfeigned approbation.

To give our readers a general idea of this performance, we shall transcribe the table of contents.

• Of the Importance of making a good Use of one's Time when at the University ; and of the Nature of this Correspondence.—Of having a correct Taste in Matters of little Moment.—Of what depends on the Choice of Company ; and of using Oneself, in Time, to make Observations on Men and Manners.—Of regulating the Passions.—Of entering upon a Course of Study.—Of Perseverance and Regularity in useful Studies.—Of Reading, considered in a general Way.—Of studying Mathematics.—Of studying the Classics.—Une Bagatelle.—Some General Observations on the Greek Tongue, and of studying it.—An Essay on the Prepositions of the Greek.—A cursory View of the Revolutions of ancient Literature.—Some general Observations on the Latin Tongue.—Of attending the public Lectures in experimental Philosophy, &c.—Of studying Logic.—Of employing leisure Hours.—Some historical Account of Logic ; with some Remarks upon Aristotle.—Of taking Care of one's Health.—Of studying History.—Of studying Rhetoric and Eloquence.—Some Account of ancient Oratory ; and of those who made the greatest Figure in it.—A Sketch of a Country Curate's Manner of living.—Some general Hints respecting polite Behaviour.—The same, respecting moral Behaviour.—The Story of Antonio.—Of studying Poetry.—Some historical Account of the Greek and Latin Poetry.—Of studying Ethics.—Recapitulation.—Some general Hints about studying Divinity.'

The following extract from Letter IV. on the subject of the Passions, will give no disadvantageous impression of the author's style, and mode of thinking.

• As long as man retains any thing that is decent and rational about him, he can never doubt of the wisdom and propriety of being able to regulate his passions : the question is, whether and how this can be effected. That it can be effected, there remains not the least shadow of doubt. Ill, indeed, would man have

have deserved to be so emphatically styled by the phisiologists a Microcosm, if the passions, which make up so important a share of his internal structure, contributed nothing to the excellence of his frame, but tended rather to obliterate the grandeur and destroy the dignity of the noblest part of it. The wonderful contrivance that is observable in this divine fabric, is not confined to the rational faculties, or to the contexture of the human skeleton, but is strikingly extended over the whole. It follows then that the passions, though some of them, upon a slight view, may appear violent and perverse, must be modelled nevertheless, and tempered by nature, so as to tend to the welfare of the individual, and of society; if so, we must necessarily have the power of directing them to just and proper ends: and indulgent nature has not been less careful of giving us this power for the right conduct of life, than of furnishing us with eyes to see, and hands to ward off an impending evil.

At the end of the eleventh Letter, the author has favoured his correspondent with an ingenious Essay on the Prepositions of the Greek Language, written by James Moor, LL. D. late Professor of Greek in the University of Glasgow.

The twenty-second Letter, on a Country Curate's Manner of living, is a very pleasing one, and being more calculated for general amusement than any of the rest, we shall present it to our readers.

' I am wonderfully pleased with your last letter, as it informs me of your intending to pass this short vacation at my little villa. Being convinced that in making me this visit, you act (as you always do) on a noble and exalted principle, the principle of true friendship, I am under no apprehension that my frugal plan of living will be at all disagreeable to you. However, to form some notion how you are likely to spend the ensuing month, see a full account of the manner in which I pass my days: should you think it tedious and abounding with egotism, remember (though we never gain by it), how naturally fond we all are of talking of ourselves.—What we are all then so liable to should be considered with great candour.

' The little village where I am curate, often puts me in mind of the flourishing state of Goldsmith's Auburn, which he has celebrated in one of the best descriptive poems in our language. The house I live in is not large, but neat and convenient; the neighbourhood social, genteel, and sensible; and my salary, though small, yet sufficient to exist upon—*Importuna tamen pauperies abest*. You are not ignorant that my mother and sister live along with me: they are what I may call liberal œconomists.

' Thus retired, I endeavour to discharge the duties of my profession with all possible fidelity. Religion (we are told) is too generally considered as matter of little moment, and is greatly refined in this our age: it, therefore, gives me much com-



comfort to see that my little flock, allowing for the unimproved state of the understanding of most of them, have a good notion of the aim, and nature, and importance of Christianity, and endeavour to live according to its precepts. I contrive to make each family, how poor and obscure soever, a short visit once a week : and in these visits, though I take care that my behaviour shall be such as to command the respect due to their pastor, it is best to put off all unnecessary forms, and endeavour, in the way of conversation, to bring in something pertinent and useful. This I consider as part of my duty, and for that reason I feel no small satisfaction in discharging it :—besides, the good people love and revere me—and, to a reasonable man, is not this alone satisfaction enough ?

‘ This takes up but a little portion of my time : the rest is employed between reading, bodily exercise, and the society of a few friends.

‘ The little learning I gleaned up, when in college, I now find of the greatest consequence, as it enables me to prosecute my studies with pleasure and improvement. A well-written book is a most precious article in one’s viaticum through life ; and should we not pity the man, whatever honours or riches he may have, who has not the convenience or the capacity of enjoying it ?—Indeed to a young person, who in the university has acquired little more than habits of idleness and intemperance, the being thus secluded as it were from the world, must certainly be one of the most irksome things on earth. The sports of the field, without a mixture of that pure and solid pleasure which arises from properly exerting the faculties of the intellect, will soon lose all their zest—all their novelty. The correct Boileau has the same truth, with more elegance—Take it in his words :

“ — *Je ne trouve point de fatigue si rude,  
Que l’ennuyeux loisir d’un mortel sans étude.*”

‘ Three or four hours, therefore, in the morning, and from ten to eleven at night, are spent in some serious and regular course of study, in arming myself with strength of mind, and reflexion, sufficient to regulate my life, and support me in every situation of it. And the evenings I divide for the most part (unless when I write a long letter to Eugenio) between reading some agreeable moralist or historian to my little family, and contending at our favourite games of piquet, or backgammon, or the nobler one of chess—How sweet “ to rock the cradle of reposing age !”

“ But a too studious and sedentary life is productive of low-spiritedness, and tends of course to impair one’s health and good humour.” True :—hence then, one is induced to take one’s gun or fishing-rod, and, attended by trusty Ranger, pass away an hour now and then among the fields in refreshing the mind, and exercising the body ; thus avoiding those many inconveniencies, which a dull and torpid inactivity brings along  
with

with it: and in these excursions I am generally fortunate enough to meet with something to make a small dish for my table; for a perch, or a partridge, with a good joint of meat, is almost all the dinner you are to expect.—

“ Form’d on the Samian schools or those of Ind  
There are who think these pastimes scarce humane;  
Yet in my mind (and not relentless I)  
His life is pure that wears no fouler stains \*.”

“ I would not have you mistake me in this matter. He, indeed, especially in my line of life, that minds little more than shooting, or hunting, or dancing, or any other such trifling occupation, is deservedly neglected and despised.—There is a wide difference between using a thing by way of amusement, and making it the principal object of one’s pursuit—the widest imaginable.

“ What also furnishes me exercise, is the care and cultivation of my little garden: this I take entirely upon myself. I cannot afford, nor perhaps would I chuse, to employ a man on purpose. And here I make a point to endeavour to excel my neighbours in the neatness of laying out my ground, and in the delicacy of my fruit.—Is it not laudable, Eugenio, even in such trifles, and especially in things of higher moment, whilst we act perfectly consistent with virtue, understood in its most extensive sense, to attend to that well known line of the noble Grecian?

“ *Αἰεὶ ἀριστεύειν, καὶ ὑπερῶχον εἶναι ἀλλῶν †.*”

“ ’Tis thus I exercise and amuse myself.

“ But there is no living without society and sensible conversation: this alone can teach us how to apply properly the knowledge we acquire in solitude, polishes our manners, and enlivens the scenes of a retired life: an opportunity of enjoying these pleasures and advantages is afforded me at our excellent neighbour’s, Philoxenus. Here one is always sure to meet with genteel and rational company. Having been formerly engaged in a public and honourable capacity, his connexions are numerous, and among persons of distinction, as well as of sense and merit. I long to introduce you to this worthy man. He loves and encourages whatever is great and amiable in human nature. He is a sincere Christian, and a profound and elegant scholar—and what can a man be more? I never read the character which Pliny ‡ draws of his friend Titus Aristo, without thinking of Philoxenus: the latter indeed is in some respects (and I speak with all impartiality) superior to the brave Roman; but that superiority he derives altogether from his religion. He is, in short, among many others, a living proof, that true Christianity and true philosophy may meet in one and the same person; so

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\* Art of preserving Health. † Il. ζ 208. ‡ See Pliny’s Epistles, I. 22.  
that

that they are by no means, as some bold men have suggested, inconsistent things—Far otherwise.

‘ A few other friends I have of considerable value. Though but a poor curate, I take care to behave with proper reserve towards coxcombs, and all narrow-hearted people; and can, thank God, look down both on their smiles and supercilious airs with all possible indifference.—I hate and detest the leveling principle, as unnatural and absurd—But be those also far from me, who can pride themselves merely on being of this or that order of men, of this or that situation of life. Than associate with such, give me rather the friendship of one like Philoxenus, and let me enjoy it far from the haunts of these men. Their wisdom, be it what it will, has not made them truly wise. Their thoughts and notions, however specious, are illiberal all of them, and shallow, and vain. Mere birth, mere money, mere any thing, except virtue and learning, can give no man living any real dignity.

‘ When we meet together, we do all we can to promote innocent mirth and cheerfulness. Some indeed suppose that this is not compatible with true religion. These men have their opinion: we have our’s: but as that is totally different, we exclude every thing of the surly kind, and admit nothing but good humour, and temperance, and candour, and universal benevolence, and manly politeness.

“ — Purâ sed libertate loquendi

Seria quisque jocis nullâ formidine miscet \*.”

‘ Thus we find conversation a most agreeable and instructive exercise, tending to give ease to the whole conduct, and to our language elegance and propriety.

‘ Should any of my rich neighbours, as the country people call them, come and dine with me, I never make much alteration in my dinner: they know my income, and did I live beyond it, they would despise and avoid me. They come, like yourself, from motives of friendship; and not in that starched, formal, and most insipid way, which is so common in modern times.—They live, it is true, in a different manner: I too, had I the means, would probably, on such occasions, enlarge my plan, but still so as to conduct things with oeconomy, simplicity, temperance; without which it is not to live.—But the means are wanting: neque tamen ego invideo aliis bonum, quo ipse careo; sed contra, sensum quendam voluptatemque percipio, si ea, quæ mihi denegantur, amicis video superesse †.

‘ I am sensible that philosophers will tell you, that he who enjoys health and a bare subsistence, enjoys enough; that such gewgaws as riches, conduce not to the real happiness of man; and so forth. Considered merely as riches, no man on earth

\* \* Claudian De Laudibus Stiliconis, lib. ii.’

† See Pliny’s Epistles, l. 10. He had no business to say—Neque enim ego, ut *multi*, invideo.—Pliny had a good deal of pride and vanity in him.”



can admit their assertion in a more extensive sense than myself; but considered as the means of doing good, of living with comfort and satisfaction, it must be allowed, on the other hand, that they then become no improper object of desire even to a philosopher.

“ Hæc perinde sunt, ut illius animus, qui ea possidet :  
Qui uti scit, ei bona ; illi ; qui non utitur rectè, mala \*.”

‘ But by no means do I say that the man who has inward peace of mind, who has universal benevolence in his heart, and can think with pleasure on his life and death, is, in any situation, an object of pity or contempt. Quite the reverse—He, and he alone, is the truly happy—the truly great man.—How sweetly does your favourite and most correct author express my notion !

“ Fortuna, sævo læta negotio, et  
Ludum insolentem ludere pertinax,  
Transmutat incertos honores,  
Nunc mihi, nunc alii benigna :—  
Laudo manentem ;—si celeres quatit  
Pennas, resigno quæ dedit, et mea  
Virtute me involvo, probamque  
Pauperiem sine dote quæro †.”

‘ But to return.

‘ It is thus, my friend, I live. If you can relish this sort of life, hasten to our humble dwelling. We anticipate the pleasure of endeavouring to make things agreeable to you. Between the harpsichord, rural diversions, visiting our worthy neighbours, engaging in friendly conversation, or in the scientific game of Chess, we shall, I hope, prevent the hours from appearing very dull and insipid. Plays, or balls, or operas, or any other public entertainment, here we have none—

“ At secura quies, et nescia fallere vita,  
Dives opum variarum ;— at latis otia fundis,  
Speluncæ, vivique lacus ;—at frigida Tempe,  
Mugitusque boum, mollesque sub arbore somni,—  
Non absunt ‡.”—

The twenty-sixth Letter, on *studying Poetry* ; and the twenty-seventh, with its continuations, exhibiting *some historical Account of the Greek and Latin Poetry*, though they contain not much that will be thought new by more advanced scholars, offer a good deal of useful and agreeable information to younger students, and display considerable reading and erudition : their contents, indeed, cannot fail at once to prove an interesting and safe guidance through this flowery region of literature.

\* Ter. Heauton. A. I. Sc. 2.’

† Lib. iii. 29.’

‡ Georg. ii. 467.’

*Discourses on several important Subjects of Christianity: in most of which the Form of an Oration is attempted, by a Concealment of the Method. By the Rev. Daniel Turner, A. M. 8vo. 6s. in Boards. Robinson.*

THE title-page of this collection of Discourses is undoubtedly intended to give us expectations of something new in form at least, if not in spirit. We cannot allow, however, that a mere Concealment of Method constitutes the Form of an Oration. But, were we inclined to allow such a position, we must observe, that the method of these Discourses is not at all more concealed than that of modern Discourses in general, delivered from the pulpit. The multiplied divisions, and particularly subdivisions of our forefathers, have for many years been out of use; but method is, and must be still retained by all who understand composition; and an attentive hearer or reader will be disappointed, if not able to discern it without unusual application. It is the best preservative against false or desultory reasoning in the composer, and the surest auxiliary to remembrance in those who are addressed. Elegance of composition requires that the joinings of the piece should not be too numerous, clumsy, or obtrusive to sight; but by no means that they should be absolutely concealed. The author of these Discourses has, therefore, in our judgment, set out on a wrong principle; but it is nearly the best thing we have to concede in favour of the composition of the first half of this volume, that we can accuse him of no particular adherence to it.

Though he incurs little blame on this point, instances of loose, or of false reasoning too frequently occur; and sometimes little violations of grammar: awkward, obscure, and affected phrases, too often deform the style; and we were particularly struck with the wild profusion, or rather confusion of mixed and discordant metaphors. We are prepared to produce examples, more than sufficient, of all the imperfections we have mentioned; but as the author, in the latter Discourses, has been considerably more correct, and may be induced, by the intimations we have given, to bestow a careful revision on his second volume, which we hope may not yet be printed, we shall content ourselves with exhibiting a specimen of a certain nauseous and canting style, to which we have the utmost aversion. ‘*Notes of mellifluous gratitude—Past, present, and future, sweetly linked together—How precious is our Jesus!—Love-exalting page, &c.*’

The volume before us contains seventeen sermons, the subjects of which are as follow.—I. On Contentment. II. The  
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Christian contrasted with the Mosaic Dispensation. III. The Danger of halting between two Opinions. IV. The Character of Christ's Friends, stated and examined. V. Marks, whereby we may know if that Character be our's. VI. Christian Fortitude. VII. An Enquiry into the Nature of religious Meditation. VIII. The Objects of religious Meditation. IX. The Divine Exemplar. X. On the First Commandment. XI. On the Second Commandment. XII. On the Third Commandment. XIII. On Vows. XIV. A Delineation of the virtuous Character. XV. The Rewards of Virtue at Death. XVI. The Rewards of Virtue in a future State. XVII. The Nature and Consequence of impious Principles.

In the thirteenth Sermon, on Vows, Mr. Turner has critically examined the nature of Jephtha's vow; and has, we think, established his own notion of it, against the common opinion of commentators, on solid grounds. A short extract will give our readers some idea of the preacher's particular sentiment.

‘What had misled them (the commentators) is, that the Septuagint and Vulgate, render the words of Jephtha, “Whatsoever cometh forth to meet me,” in the masculine, as if he had said—whosoever, or what person soever cometh forth, whereas the original is really indeterminate. Again, they did not attend to the particle used, which should be taken in the disjunctive sense, *or*, instead of the conjunctive *and*. This is what some judicious critics have since clearly shewn to be the right signification both here and elsewhere: so that Jephtha's words should be rendered “shall surely be the Lord's, *or* I will offer it for a burnt offering.” That is, if it be a human creature, he or she shall be consecrated to the service of God, as some sort of Nazarites were; or if a beast, it shall be offered up for a burnt-offering if it be fit for it; if not, it shall be exchanged, at the pleasure of the priest, for another that is so.’

This Sermon, and those which succeed it are, upon the whole, better written than those preceding. Though we should not recommend any of them as models of fine writing, or even of eloquence, to which, from the title, they ought to have some claim, it would be unjust to deny, that many of them contain a great deal of good matter, and that all are written with a pious earnestness, which may render them conducive to Christian edification. For which reason, as well as because the author has published them partly with a view to acquire some aid toward the education of a numerous young family, we heartily wish them many readers.







*A Treatise on the Administration of the Finances of France. By Mr. Necker. Translated from the genuine French Edition, 1784, by Thomas Mortimer, Esq. Three Volumes. 8vo. 1l. 1s. in Boards. Johnson.*

**I**T was a subject of admiration in Europe, to see an obscure man, without prétensions, titles, or connection; at the head of the administration of the finances, in a kingdom whose nobles are eager for employment in the service of the sovereign. Yet mons. Necker maintained his station, if not with dignity, at least with the credit of profound attention, and inflexible integrity; and France owes to these qualities; and to the humane attentions of madame Necker, some very salutary regulations. If we look more nearly into the subject, we suspect it will appear, that our author was more distinguishable as a financier than a statesman; he was an exact accountant rather than a great minister, as he has been ostentatiously called. While confined to his office, he excited no jealousy; when he aimed at a seat in the council of state, he soon fell. His fall, however, seems to be marked with none of the characteristics of a great mind. In his introduction, he complains of it, and complains with a feminine weakness: his tears are said to have been drawn for the loss which the state has sustained; but the mind which feels its own dignity will permit no consideration to detract from it. He may regret his fall; and the misfortunes of his country; but he will be still himself, unruffled and unmoved.

As a financier, mons. Necker acquired much credit. He provided resources for the first years of an expensive war, without additional taxes, and left more ample supplies in the treasury than he found in it. It has been indeed suggested, that, by these exertions, the strength of the state was so much weakened as to require supplies more than equivalent in the subsequent period; but there is much reason to think, that these suggestions are rather the shafts of calumny, aimed at the only part where a wound could, without danger of detection, be inflicted. We know the wonderful effects of order and regularity in every department of this kind; and we see nothing in his actions which may not be accounted for by these, joined with the details which we meet with in the volumes before us. They are indeed rich in the treasures of political arithmetic: the facts are valuable, because they are probably very near the truth; but it is for facts only that we esteem them. The reflections are often trifling and jejune; sometimes erroneous. We have many works on political arithmetic in our own language,



guage, of a much higher value with respect to their reasoning.

In the introduction, filled with much egotism, and some very trifling subjects, our author displays what a minister of finance ought to be; and what *he* was. A man of real dignity does not speak of himself; but we shall not dwell on it; for we own that it has diminished *our* respect for mons. Necker. He then proceeds to an account of all the taxes in France. The particulars are not easily understood by an English reader; so that we may observe that they exceed five hundred and eighty-five millions of livres\*. These are followed by general reflections on the extent of the taxes; and this chapter is distinguished by candour and humanity. Our author does not seem to be well informed on the subject of the British taxes, their comparative burthen on the poor, or the quantity of circulating specie. We think that he is mistaken on all these subjects; but they are of little consequence to his general argument. The expences in collecting the taxes is then examined, and found to be about  $10\frac{4}{5}$  per cent: we suspect that, considering every circumstance, England is not so cheaply served. The two next chapters are on the savings which might be still made in the collection; but these regulations are local, and would not be easily understood: our author's plans, perhaps by the superior weight of influence, were only partially tried, and, after trial, were rejected. The two following chapters are on the conversion of all the taxes into a land or a poll-tax. The former of these contains some very judicious reflections; but we have seen them already in various shapes: the next chapter is on the number of revenue officers. Mons. Necker then proceeds to the population of the kingdom, which he thinks amounts to twenty-five, or nearly twenty-six millions of inhabitants. But we much suspect his data; for the strange disproportion of births in the years 1773 and 1774, which, in the latter year exceeded the former by 39,170, an excess not progressional, or in any way accounted for, leads us to doubt greatly of the accuracy with which the lists are kept. In the year 1777, the births exceed those of the preceding and succeeding years, by above fifty thousand. The causes of the variation of population, which mons. Necker mentions, will

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\* Instead of actually reducing the several sums, we shall add an easy rule for this purpose. Strike off from the number of livres the two figures on the right hand, multiply the rest by 4, increase the product by one-tenth of itself, and the sum is the answer required. Thus 100,000 livres is equal to £. 4400; for  $100,000 \times 4 = 4000$ , and  $4000 + \frac{4000}{10}$  or  $4000 + 400 = 4400$ .

not account for these great disproportions, nor these sudden changes. We shall extract the following chapter entire, as it recapitulates the whole.

‘ The whole extent of the kingdom, exclusive of Corsica, consists of twenty-six thousand nine hundred and fifty-one square leagues, twenty-five to a degree ; consequently, of two thousand two hundred and eighty-two, two-fifths toises, (French fathoms) per league.

‘ Its population consists of twenty-four millions six hundred seventy-six thousand inhabitants \*.

‘ This allows nine hundred and sixteen individuals, for every square league.

‘ Its taxes amount to five hundred and eighty-four millions, four hundred thousand livres †, which is twenty-one thousand six hundred and eighty four livres per square league.

‘ And twenty-three livres, thirteen sous, eight deniers per head, for persons of all ages, and of both sexes.’

Monf. Necker then enumerates the taxes, immunities, population, extent, and principal resources of each generality, into which the kingdom is divided. The facts in this chapter are numerous and valuable ; and the exactness of the returns in general cannot be suspected. But there is much reason to think that the population is exaggerated ; that of the city of Paris, in particular, estimated at about six hundred and fifty thousand, should certainly be much reduced, if we would come near the truth. Next follows an account of the extent, taxes, and population of Corsica, and the colonies. Corsica, we find, does not produce a sufficient income to defray the expences of its civil establishment. The first volume concludes with general observations on the reform of the taxes, which we cannot abridge : indeed they are chiefly local, and not distinguished by their depth ; nor are they of that general comprehensive nature, as to be easily applied to other countries.

In the second volume, the first object is a proposal to equalize the taxes on salt. This substance forms a very considerable source of the French revenue ; though, as usual, when taxes are carried so high, the means of raising a supply is often destructive to it. The contraband trade in salt exceeds the greatest expectations ; and the brigades, to prevent this trade in general, we find amount to twenty-three thousand men. The whole of the subject is well and clearly explained. The tobacco tax is next explained, which, like all the other French

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\* Twenty-four millions eight hundred thousand inhabitants, including Corsica, whose population consists of one hundred and twenty-four thousand souls.

† Five hundred and eighty-five millions, including the taxes paid by Corsica, which amount to six hundred thousand livres.

taxes, by various immunities, is partial, oppressive, and with difficulty examined. The third chapter is more general, and contains 'Observations on the Duties on Importation and Exportation; with Reflections and Researches on the Ballance of the Commerce of France.' In considering this subject our author, in some instances, makes the proper allowances; but in others he is deficient. The following observations deserve attention.

'I will suppose that, either from fixed ideas, or from conjectures, a general statement is made of the importations and exportations of a kingdom; a valuation in money must necessarily be made of each part of this double commerce, if we wish to know the amount of the balance of the commercial exchanges; now this valuation, as it is usually made, is extremely imperfect.

'Let us apply this proposition in the first place, to merchandise imported, and let us take France for an example, that we may avoid the confusion that would arise from the generical words of country, or kingdom.

'Let a valuation then be made in France, of the merchandise of foreign countries, according to the current price of those commodities in the centre of the kingdom, or in one of its principal commercial towns; the debt contracted by the state will, by this method, be greatly exaggerated; for the current price of foreign commodities in France, is composed not only of the sum paid for them to the nation who has sold them, but likewise of the duties of entry exacted at the different custom-houses; and lastly, of the profit or interest on the advances made by the French merchants, who have imported them as objects of trade: yet, of these three articles just recapitulated, only the sum paid to the foreign seller is a debt of the kingdom.

'The expences of carriage, or of freight, are likewise comprised in the current value of foreign merchandise; now if this freight has been gained by the national shipping, a still greater deception will happen in the statement of the balance of commerce, if the merchandize imported is valued according to the current price in the kingdom.'

The facts on which his estimates are founded, are not very particularly and accurately stated; but he estimates the balance in favour of the kingdom at seventy millions of livres. This balance chiefly arises from the products of their West India islands, and the foreign sale of their manufactures. This is insisted on with some force; but it must be very evident, without any particular assistance from the custom-house books. We allow France to be an ingenious and flourishing nation; but, if the subject were examined with a critical eye, we suspect that the balance would be somewhat lessened. Many deductions occur



to us, which the author has not made. We ought to add that, in monf. Necker's opinion, the state of exchange is but a superficial and erroneous method of judging of the favourable balance in the commerce of a nation.

The fourth chapter contains general ideas on the reform of the customs; and the four following ones relate to the constitution of, and the arrangements in, the provincial assemblies. The observations on these subjects are chiefly local.

The next object of attention is the clergy. They are exempt from most of the taxes, and their subsidies are in general *free gifts*; but they tax themselves for this purpose, and they raise above ten millions of livres annually. About two hundred and fifty thousand of these are appropriated to the Royal Hospital of Invalids. The king adds two millions five hundred thousand livres to the residue; and the whole is applied to the general debt, occasioned by the free gifts, and to other public works. The whole income of the clergy is *estimated* at one hundred and ten millions of livres. Some very just and humane reflections, 'on the disposal of benefices,' conclude this subject.

The eleventh chapter contains 'Researches and Reflections on the national Debt of France, and the Means of paying it.' Schemes of this kind are so often visionary, and, from various causes, so seldom practicable, that we shall only observe, that monf. Necker proposes to convert the funds into life-annuities. The state of the public expences in France, is still less an object of our attention; but the facts are the more curious, since they have not been before published; and they will afford some valuable information respecting the state of the kingdom, and a comparison of the French and English finances. The volume concludes with a supplement, relating to some little differences between our author's account, and that in the French edict, in 1784.

The first part of the third volume relates to the weight of money, and circumstances relative to the coinage. The subject is complicated, and too long for our investigation at present: that part of it which relates to the profit of the sovereign on coinage, is in a great measure new, and, with a few restrictions, we believe very correct. The quantity of specie in France is said to amount to two thousand two hundred millions of livres. The increase of specie during the last peace, was considerable, and it is calculated by our author with some accuracy: the increase in other nations is examined and calculated; but with so few foundations in fact, that we shall not follow the detail. The advantages and inconveniencies, arising from an increase of the specie, and the progress of luxury, are connected with the former subject, and examined, at some length, with great propriety.

The three next chapters are miscellaneous ; ‘ on the Fortunes of Financiers ;’ ‘ Reflections on the Solicitations of the Great, and the Necessity of resisting them with Firmness ;’ and ‘ on the Places which enoble the Possessors :’ the number of the last excites our author’s attention ; and he labours to shew that these kinds of rewards have been misapplied, and are injurious to the kingdom.

Monf. Necker then proceeds to work-houses, hospitals, and prisons. All these were much improved during his superintendence ; but he candidly allows, that farther improvements are still necessary. There are, we find, above seven hundred public hospitals, and about one hundred private smaller ones : the number accommodated are from one hundred to one hundred and ten thousand persons : the incomes (of which nearly one-fourth belongs to the Hotel Dieu, and the great hospital in Paris), exceed eighteen millions of livres. For the army and navy, there are about seventy institutions of this kind ; and the usual number of sick is about six thousand. After some observations on the necessary reformation, monf. Necker procured the establishment of one, under the strictest regulations ; and the ~~weekly~~ expence of each patient was, in 1779, equal to four shillings and eleven pence sterling ; but it gradually increased, though in 1783, it was only five shillings and three pence. We mention these facts, for the example of the different hospitals in this kingdom. The very necessary reforms in the Hotel-Dieu were made by monf. Necker ; and the new regulations superintended by madame Necker, who was also very instrumental in the improved management of the new institutions. Monf. Necker also reformed the prisons ; and his regulations are very useful and humane : they may be attended to, and imitated with advantage ; but is the Bastile in its former state ? it is not mentioned in this work, except to enumerate expences requisite to its support.

Some farther reflections on the ‘ Commerce of Corn ;’ inquiries ‘ on the clearing of Waste Lands,’ then follow ; but they present nothing of sufficient importance to induce us to enlarge. ‘ Reflections on the Interest of Money, the Maintenance of Public Credit, and the Circulation of Specie, are of more importance ; but our article is already extensive. A great part of this chapter is employed in arguments to establish the credit of the French funds ; but, though many of the circumstances supposed necessary for this purpose, concurred in 1782, the loan of that year was not filled. Monf. Necker says, because one of the conditions was a reimbursement, which was distrusted,—a distrust always fatal where, in the best situation, the lender depends on the life of the monarch. Our author contrasts the facility with which the loans were

were filled in England, and gives many good reasons for the different events, but the first and greatest is general public confidence, which occasions a struggle to be in the first lists, because the subscriptions may be again immediately sold with advantage. The great number of subscribers is therefore a little fallacious.

We next receive an account of an institution established at Paris, instead of the pawn-brokers, called Mont de Piété; and afterwards some observations on, or rather a defence of, the mode of borrowing on life-annuities. The most useful method of receiving the assistance which the liberality of patriotism may offer, is then explained, and the impolicy of the droits d'aubane clearly pointed out. The twenty-sixth chapter is on Banks, particularly the Bank of England, and its illegitimate child, the Casse d'Escompte, which is perhaps not so firmly re-established as mons. Necker supposes. This chapter, however, contains some very valuable information. The rest of the work is so miscellaneous, that we must content ourselves with transcribing the titles of the several chapters: 'Regularity in the Royal Exchequer; Ideas of the Establishment of a general Board, for Researches and Information; on the Economy of Time; the Spirit of System; the Nomination to the Offices of Intendants of Provinces; the Change of Principles and Persons in the Administration of the Finances; a concise Enumeration of the Sources of the Power of France; and a Declamation against War, with Arguments against it in a political View, and Answers to its Apologists.' The volume concludes with the author's reasons for undertaking the work; and this part resembles too much the introduction.

We cannot conclude this article, without our commendations of the translator, who has executed this uncommonly difficult task with great clearness and precision. Those will best understand his merits who have looked into the original, which, to ordinary readers, is scarcely intelligible, from the numerous terms seldom met with in the usual publications.

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*The Structure and Physiology of Fishes explained, and compared with those of Man and other Animals. Illustrated with Figures. By Alexander Monro, M. D. of Edinburgh. Large Folio. 2l. 2s. in Boards. Robinson.*

THIS is another attempt of the industrious professor, (whose 'Observations on the Nervous System,' we reviewed in our fifty-sixth volume), to illustrate a subject hitherto imperfectly understood. This work, however, may be considered



as anatomical rather than physiological; for we have very little satisfactory information relating to the different functions of these animals. The structure is illustrated with plates; but, with a very few exceptions, they do not deserve a better character than those which *deformed* Dr. Monro's last work. A few of these plates, engraved by J. Beugo, have a clearness and brilliancy which are strongly contrasted by the black indistinct engravings of Mr. Donaldson: yet a few of this last gentleman's works seem to be rising into a kind of relief: we hope they are the dawnings of improvement.

The anatomy of fishes was not wholly unknown. About the latter end of the last century, Dr. Samuel Collins published two volumes in folio, on the anatomy, physiology, and pathology, of the human body, illustrated by that of different animals. Fishes contribute to the illustration: many seem to have been dissected, and numerous representations of their structure are subjoined. The plates are engraved by Faithorne, a man of no mean abilities, and they are executed with great strength and clearness. The inaccuracies in the human anatomy have lessened the character of that work; and it is now in little credit, or almost unknown. Yet the structure of animals is delineated with tolerable fidelity; and we must confess that we have been indebted to it for more clearly comprehending some of Dr. Monro's descriptions. The part of the work before us, which describes the lymphatics and lacteals of aquatic animals, is entirely new, and more certainly original.

Our author begins with describing the heart, vessels, and circulation of fishes. The distribution of the blood in the gills is astonishingly extensive, and every particle must be exposed to the water.

† For in each side of the body of a skate there are four double gills, or gills with two sides each, and one single gill; or there are in all eighteen sides or surfaces on which the branchial artery is spread out. On each of these sides there are about fifty divisions, or doublings of the membrane of the gills. Each division has on each side of it one hundred and sixty subdivisions, doublings, or folds of its membrane; the length of each of which, in a very large skate, is about one-eighth of an inch, and its breadth about one-sixteenth of an inch. So that in the whole gills there are one hundred and forty-four thousand subdivisions or folds, the two sides of each of which are equal to the sixty-fourth part of a square inch; or the surface of the whole gills in a large skate is equal to two thousand two hundred and fifty square inches, that is, to more than fifteen square feet, which have been supposed equal to the whole external surface of the human body. When, after a good injection  
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of the artery, a microscope is applied, the whole extent of the membrane of the gills is seen covered with a beautiful net work of exceedingly minute vessels.'

In the observations on the circulation of the blood we find remarks both of a trifling and an important nature, Dr. Monro thinks, that the thick coats of the bronchial veins really possess a muscular power; in proof of this opinion, he alleges, that in the mesenteric veins, and vena portarum of an ox, he can demonstrate a truly muscular coat. Mr. Hunter, we are told, has been successfully employed in some experiments, to ascertain the real muscular power of the blood-vessels, independent of their elasticity; and we hope he will enable us to resume the subject by their publication. Considerable dilatations in the abdominal veins, are owing, in Dr. Monro's opinion, to the temporary retardation of the blood, by the superior weight of water; but, as they occur in the lymphatic system also, it is probable that they accomplish some other and more latent purpose.

'The last remark I shall make is, That, the circulation of the blood being carried on in the cartilaginous fishes in the same manner as in the osseous or pisces of Linnæus, and the whole mass of blood passing through their gills, they must breathe regularly and uninterruptedly to furnish blood to the brain and other organs, or they cannot possess the *pulmo arbitrarius* as is supposed by Linnæus: so that there appears no just reason for classing them with the amphibia.

'In the animals which are commonly reckoned amphibious, to wit, the tortoise, the frog, the lizard, and the serpent, a part only of the mass of blood passes through the lungs. In the frog and common small lizard, branches are sent off from the aorta, which, if we may judge from their size, convey about one-third part of the whole mass. In the tortoise, the serpent, and such of the lizard tribe as have two auricles and ventricles, a greater proportion passes through the lungs. In the sea tortoise, the blood from the lungs passes into the left auricle, and from it into the left ventricle. From the left ventricle it is transmitted, by transverse canals or holes in the septum between the ventricles, into the right ventricle, where it is mixed with the blood which is sent from the *venæ cavæ* through the right auricle. All the arteries, therefore, take their rise from the right ventricle; and the pulmonary arteries are considerably smaller than those which supply the place of our aorta.

'In all these animals, therefore, every part of the body may receive a considerable portion of blood, although the respiration and free passage of the blood through their lungs be interrupted. Hence they are not under the same necessity with the mammalia birds, and fishes, of breathing frequently, regularly, or alternately; or they enjoy the *pulmo arbitrarius*.'

Dr.

Dr. Monro next describes the mucous ducts which are very beautiful: they are attended by very numerous nerves; and, in one instance, the nerve becomes pellucid, so that the author thinks its nature is also changed.

The watery liquors in the head, pericardium, and peritoneum of fishes, next claim his attention. They are salt, but contain only about half the quantity of salt usually found in the same bulk of sea-water: in some instances, much less. There are passages in some fishes, from whence the water may pass out; but a valve seems to be interposed to exclude the entrance of any. In the skate too, the pericardium opens into the abdomen; but, from the structure of the duct, nothing can pass from thence into it. Dr. Monro thinks that fluids may pass the valve, and that these liquors are derived from the sea; but they are less salt than sea-water; and besides, in that way, they cannot get into the head or the pericardium. The reason, which he appears to have overlooked, is probably the following; fishes, though they live in salt water, have no salt in their composition; and their absorbent vessels seem to separate the pure water from the element in which they live; yet, in different circumstances, this operation is not so perfectly performed as may be necessary for the preservation of the animal; so that another outlet is necessary for the deleterious substance. It is, therefore, separated by the vessels of the pericardium and abdomen, and from thence passes out. That the liquor is recrementitious is evident from its being in some instances connected with the urinary organs; and it is by no means certain, that it has not some outlet from the head. In man we find there are secretory organs, to throw out what may have been absorbed by the indiscriminate operation of other vessels; so that our opinion is supported by analogy. The other secreted organs, and their liquors, afford nothing which deserves attention, or that we can abridge.

The most curious organ of fishes is the swimming bladder. Dr. Monro describes its various appearances, and the communications, in some genera, between it and the stomach: he renders it probable, that the air either passes from the stomach, or is produced by secretion. This subject, however, is left in a very imperfect state: we shall supply the imperfection by a few facts, and some conjectures. It is highly probable that, in some instances, this bag lessens the specific gravity of the fish, and contributes to raise it in the water; but this is not always the case, for the bag is very small, in proportion to the size of the animal, and not capable of any very great enlargement. This effect is therefore a secondary one, and does not merit much consideration. The primary one is probably



to prevent bad air from mixing with the fluids, or as a receptacle for that which has been admitted. We know that phlogisticated air is deleterious to fishes, and that they die if they have not a supply of this element, in a proper state. At the same time, they cannot always discharge the foul air, contaminated by their bodies, or supplied from their food; so that in some instances they drive it into this receptacle from the stomach; in others, it is secreted into it from the blood. Dr. Monro has not examined the nature of the air in the bladder; but we know it to be noxious, and it gives probability to our accounts. On every supposition, some excretory duct is necessary; though none has been yet discovered, and no one has thought of the means by which it is to be discharged. We would suggest, though with great diffidence, that from the addition of phlogiston, in consequence of its being confined within an animal body, it may be changed to water, and exude through the pores into the abdomen, from whence there is a ready discharge. We know that water, in an attenuated state, will pervade much closer membranes.

Dr. Monro next describes the absorbents of fishes, with great accuracy; he has traced them to the surface, and demonstrated that they are a distinct system of vessels, with the same properties as the human lymphatics. As those of fishes have, however, no valves, it is probable that their coats, though thin, are really muscular. Our author then attempts to refute Mr. Hewson's opinion relating to the spleen, by some observations on the spleen of fishes, and to establish his own title to the discovery of the lymphatic system, in these animals. The refutation is very successful; but we believe it is now unnecessary: we are sorry so much has been said about the discovery, by men of abilities; for, in the state in which this branch of anatomy then was, it lay ready for the first and most superficial enquirer.

Our author proceeds to the brain, and organs of sense in fishes. The organs of seeing and smell have been often described: those of herrings have been already described by Mr. Hunter, who is not, however, once mentioned by our author. It must be acknowledged, that the description of the ear, in this volume, is more full, particular, and discriminated, than that of Mr. Hunter, in the *Philosophical Transactions*. We made large extracts from that paper, in our fifty-fifth volume, page 410; and need not now enlarge on the subject, or compare the accounts.

The experiments on hearing in water, are very instructive. We find that the tremors of the air are communicated readily to the water, and those of water to air; so that tremors, excited

cited by percussion, can be heard when the head is either above or under water. When a bell is plunged in water, the sound is more grave than in air; the bell, which in air sounded the highest G of a common harpsichord, in water sounded a fifth false lower, or the C sharp under G.

From the account of the eyes of fishes, we shall select the following remarks.

‘ Upon the whole, therefore, we are led to the conclusion, that the primary use of the almost completely spherical figure of the crystalline lens of fishes, or great convexity especially of the anterior part of their lens, which I find projects in the cod about seven fortieths of an inch beyond the iris, is to take in a large field of the objects around them; which was particularly necessary, as the motion of their neck is inconsiderable.

‘ To enable them, with the same length of the axis of the eye as in the quadruped, to collect into a focus on the retina the rays of light coming from the dense medium of water, four chief circumstances concur.

‘ In the first place, we observe that their crystalline lens is more convex, or composed of portions of smaller spheres, than in land-animals.

‘ In the next place, we have found that their crystalline lens is, in corresponding parts, much more dense than in animals which live in air.

‘ Thirdly, that the lens in fishes possesses powers of refracting light far beyond what have been calculated by authors, who have proceeded on the supposition that these powers were proportioned nearly to its specific gravity.

‘ In the last place, the vitreous humour of fishes being lighter than that of land-animals, the rays of light issuing from their lens will be refracted in a greater degree, or brought sooner to a focus.’

The next subject of enquiry is the anatomy of the *sepia lorigo*, the ink-fish. Our author suspects the black fluid to be the bile of the animal; and to be merely a recrementitious liquor.

The description of the anatomy of the *echinus marinus*, was read to the Philosophical Society, at Edinburgh, in the year 1761. We are sorry that we can neither analyse or abridge it; for it is extremely curious: we can only hint, that the perforations in the shell of this animal are intended for the passage of absorbents; and that absorption seems to be carried on by means of muscular action. With this account the volume concludes.

This work contains fifty tables, so that it would lead us too far, even with the utmost conciseness, to explain their subjects. It is enough to remark, that they are intended to illustrate every part of the description; and, if properly executed, would

would have been very valuable : at present, they supply the necessary defects of language very imperfectly.

If we examine this work as a whole, we shall find great reason to commend the industry and attention required in so many laborious dissections ; we cannot praise the author very highly for acute comprehension, or penetrating sagacity. His inductions are, however, generally clear ; and, so far as they extend, always accurate. We wish him to pursue the subject ; for much remains to be examined, and many doubts, particularly in the physiology of fishes, to be elucidated.

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*A new System of Modern Geography : or, a Geographical, Historical, and Commercial Grammar ; and present State of the several Kingdoms of the World. By William Guthrie, Esq. The Astronomical Part by James Ferguson, F. R. S. The Third Edition, with great Additions and Improvements, and a copious Index. Illustrated with a Set of large and accurate Maps. 4to. 1l. 15s. in Boards ; the Maps half-bound. Dilly and Robinson.*

WE have seldom examined a work so useful in its original form, and so much improved in the subsequent editions, as the System now before us. It contains such a fund of information, drawn from various sources, that it has a powerful claim to be considered as a repository of valuable knowledge.—Of the improvements in the present edition, a general account is given in the following advertisement.

‘ The original Preface so fully explains the general plan of the work, that it seems only necessary to give some account of those additions and alterations which the fluctuation of states and of human affairs renders unavoidable.

‘ Since the last quarto edition came from the press, the stock of geographical and political knowledge has been much increased, by the publication of some valuable accounts of travels and voyages. These have been carefully perused ; and from them are now added many interesting particulars relative to Russia, Poland, Sweden, Denmark, Spain, Switzerland, the two Sicilies, the East Indies, the islands in the Pacific Ocean, the western parts of North America, Hudson’s Bay, and other places.

‘ Amidst the public events which afford matter for historical narrative, this edition contains a faithful account of the most important transactions in the late war between Great Britain and her colonies, and also with the powers of France, Spain, and Holland ; the several steps leading to a general peace, and the establishment of the independence of the American states. Nor has less attention been paid to the dispute between the emperor of Germany and the Dutch ; and to the various changes which have happened among other states on the continent.



\* In those parts of the work which relate to the origin of nations, and their manners and systems of religion, the additions are too numerous to be specified. The latest discoveries and observations, from the most approved authorities, are blended with the former narrative; and enlargements, equally authentic, have been made with respect to the geographical and historical accounts of each country.

\* That the work might farther merit its distinguished reputation, the maps have not only been accurately examined, and greatly improved, by the most eminent artists, but seven new plates are added, illustrating the alterations resulting from the establishment of the American states, the dismemberment of Poland, the late acquisitions of Russia, and other European powers, the discoveries in the Southern Ocean \*, &c.

\* When the great number of maps, with the addition of at least one hundred pages of letter-press, and a considerable enlargement of the Index, are considered, the proprietors may with truth assure the public, that the alteration in the price is far from being adequate to the attention, pains, and expence, which have been employed to give this work an additional claim to general notice and approbation.\*

This advertisement does not exaggerate the merits of the present edition, and, in some respects, leaves them undisplayed, particularly with regard to chronological, and other scientific improvements.

In the account of the northern countries, we observe that due attention has been paid to Mr. Cox's judicious remarks, relative not only to the topographical state of the different nations, but their revenues, institutions, and many miscellaneous circumstances, derived from this intelligent traveller, and others of respectable authority.

In what relates to the Netherlands, we perceive that the history is enlarged; and a perspicuous account is given of the late differences between the Dutch and the emperor of Germany.

Many enlargements are made to the narrative concerning Switzerland, and likewise to that of Spain and the Two Sicilies, from the entertaining Travels of Mr. Swinburne. We observe also, that the history of Spain and Portugal, which in the former editions was delivered conjunctly, is now very properly separated; and a particular account is given of the sovereigns, and all the memorable transactions in each kingdom.

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\* \* Besides a large chart of the World, comprehending the tracks and discoveries of captain Cook, &c. the maps of Hindostan, China, Russia, England, the Seven United Provinces, the Austrian, French, and Dutch Netherlands, the British dominions in America, and of the Thirteen United States, are entirely new.\*

In

In describing the manners and customs of the Turks in Europe and Asia, the editor has added to the narrative, from different sources, among which we find the respectable authorities of colonel Mance, and baron de Tott. We shall insert the following description of Constantinople.

Constantinople is at this day one of the finest cities in the world by its situation and its port. The prospect from it is noble. The most regular part is the Befestiu, inclosed with walls and gates, where the merchants have their shops excellently ranged. In another part of the city is the Hippodrome, an oblong square of 400 paces by 200, where they exercise on horseback. The Meidan, or parade, is a large spacious square, the general resort of all ranks. On the opposite side of the port are four towns, but considered as a part of the suburbs, their distance being so small, a person may easily be heard on the other side. They are named Pera, Galata, Pacha, and Tophana. In Pera, the foreign ambassadors and all the Franks or strangers reside, not being permitted to live in the city; Galata also is mostly inhabited by Franks and Jews, and is a place of great trade. The city abounds with antiquities: the tomb of Constantine the Great is still preserved. The mosque of St. Sophia, once a Christian church, is thought, in some respects, to exceed in grandeur and architecture St. Peter's at Rome. The city is built in a triangular form, with the Seraglio standing on a point of one of the angles, from whence there is a prospect of the delightful coast of the Lesser Asia, which is not to be equalled. When we speak of the seraglio, we do not mean the apartments in which the grand signior's women are confined, as is commonly imagined, but the whole inclosure of the Ottoman palace, which might well suffice for a moderate town. The wall which surrounds the seraglio is thirty feet high, having battlements, embrasures, and towers, in the style of ancient fortifications. There are in it nine gates, but only two of them magnificent; and from one of these the Ottoman court takes the name of the Porte, or the Sublime Porte, in all public transactions and records. Both the magnitude and population of Constantinople have been greatly exaggerated by credulous travellers. It is surrounded by a high and thick wall, with battlements after the Oriental manner, and towers, defended by a lined but shallow ditch, the works of which are double on the land side. The best authors think that it does not contain above 800,000 inhabitants, three-fourths of whom are said to be Greeks and Armenians, and the rest are Jews and Turks. Others suppose the inhabitants not to exceed 600,000. The city hath been frequently assailed by fires, either owing to the narrowness of the streets and the structure of the houses, or the arts of the Janizaries. In August 1784, a fire broke out in the quarter situate towards the harbour, and spread into other quarters, and about 10,000 houses (most of which had been rebuilt since the fire in 1782) were consumed.

Amidst

Amidst the enlargements made by the editor, he has not been inattentive to Palestine, that country which must always be held in particular veneration by every Christian reader. We shall only transcribe the following passage.

‘ Under the government of Sheik Daher, the ally of the famous Ali Bey, some part of Palestine revived. He enlarged the buildings and walls of St. John de Acre, formerly Ptolemais, and shewed great indulgence to the Christians. Its inhabitants were lately computed at 40,000. Caifa, which stands on the declivity of Mount Carmel, distant about 20 miles from Acre, was also new built and enlarged by Daher. The ancient Joppa, now Jaffa, 50 miles west from Jerusalem, stands on a rocky hill, hath an harbour for small vessels, and its circumference is about two miles. The number of inhabitants is 7000; the western part of the town is inhabited by Christians. The present state of Ramah is deplorable, its walls in decay, and most of the houses empty, though the number of inhabitants is still between 3 and 4000. Not a house is standing of the once magnificent city of Cesarea, but the remains of the walls testify its former grandeur. Azotus is about two miles in circumference, the inhabitants are near 3000, and mostly Mahometans: an old structure is shewn here, with fine marble pillars, which is said to be the house that Sampson pulled down, when insulted by the Philistines. Gaza is still respectable, it extends from east to west three miles, and is a mile in breadth, divided into the old and new town. The last is inhabited by the inferior Turks and Arabs: the number of the inhabitants is reckoned to be 26,000. It is about five miles from the sea; and outside the town is a market for the country people to dispose of their commodities to the inhabitants, for they are not permitted to enter the town. The country around is very fertile, but its chief produce is corn, oil, wine, honey, bees-wax, flax, and cotton.’

Additions are made to the account of Hindostan, relative to its divisions under different princes and rajahs, its government, inhabitants, religion, and customs. These subjects had formerly not been treated with sufficient precision, and, from our increasing connection with that country, they become daily more interesting to British readers. Additional accounts of Egypt, and its chief cities, are likewise introduced; and the late revolutions in that country are distinctly related.

In the account of America, equal attention is observable. In particular, we meet with an accurate description of the remaining British provinces in that quarter, with those now denominated the United States.

With regard to the discoveries of the late circumnavigators, many pages are added to the former description of the islands in the South Pacific Ocean, and the researches which have been



been made in the western parts of North America. The circumstances are selected with judgment, and afford a comprehensive view of those numerous acquisitions lately made to geographical knowledge.

We observe large additions in what relates to the history of the British empire, accompanied with a detail of the important transactions which preceded and followed the last general peace.—The state of the East India company, now so closely connected with the most essential interests of the nation, is a subject which merits great attention. The editor has accordingly given a distinct account of their possessions and trade, and of the late act of parliament for the regulation of the company's affairs.

So numerous are the improvements which have been made in the present edition of this valuable work, rendered still more worthy of the public favour, by the maps with which it is now enriched, in a separate volume. We must, therefore, acknowledge it to be the most comprehensive, and most useful system, of the kind, that has hitherto appeared.

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*The History of Wales, in Nine Books: With an Appendix. By the Rev. William Warrington. 4to. 1l. 1s. in Boards. Johnson.*

AT commencing the review of this work, we are naturally led to a comparison of nations in a state of civilization and barbarism. It is the glorious privilege of the former not only to flourish in the arts of peace, but to confer superior lustre on the warlike achievements of their own people; while the latter are destined to live in rude obscurity, and, perhaps, to sink into oblivion. The fate of the Welsh resembles, in some measure, that of the ancient nations, which became successively a prey to the irresistible inundation of the Greek and Roman power. They fought for their liberties with a perseverance, which affords unquestionable proof of their valour; but the history of their wars being chiefly transmitted by the conquerors, there is reason to think that the narrative is not only written with partiality, but must often be deficient with respect to true information.

Considering the extraordinary attachment of the Welsh to the renown of their ancestors, it may justly appear surprising, that no native of that country has ever yet attempted a regular history of the nation. But of a composition of this nature their language afforded no example; and while the valiant exploits of their progenitors were celebrated in the songs of

their bards, they were little solicitous for that fame which could but faintly strike the imagination through the medium of inanimated records. They may now, however, congratulate their country, that a writer has arisen, with a genius very different from that of the monk of Llancarvan, and traced the various fortunes of the ancient Britons, not only with a dignity suitable to historical composition, but with such a degree of liberal sympathy, as, had he not thought proper to inform us he is an Englishman, we might have entertained an opinion that he derived his descent from ancient Cambria.

The reverend author sets out with a review of the British history before the retreat of the Romans from this country; and, in the second book, continues the subject from this epoch to the period when the ancient Britons were driven into Wales, Cornwall, and Armorica. He justly observes, that the most obvious defect in the national character of the Britons was a negligence in establishing a naval power; though experience, and the nature of their situation, pointed out the propriety of this measure, as the only effectual means of contending with the Saxons, and of counteracting their designs.

The third Book contains an Account of the Wars between the Saxons and Welsh, to the Death of Roderic the Great. About the commencement of this epoch, towards the end of the sixth century, Cambria took the name of Wales; and the inhabitants ceased to be denominated Britons, by which title they had been hitherto distinguished. But their former severity of fortune, Mr. Warrington observes, continued to pursue this brave people in their last asylum, as the conquest of this barren domain became the object of ambition and policy to the Saxon and Norman princes. In this period of the British history, Cadwalader affords an example of that superstitious weakness, which has actuated a few other princes, even since the decline of the dark ages.

‘ After residing some time in the court of Bretagne, says the historian, Cadwalader prepared to return into Wales; having heard that the famine and pestilence had ceased, and that the Saxons, with increasing power, were endeavouring to extend their conquests. With this view he collected an army, composed of his own subjects and his allies the Bretons, with a suitable fleet to transport them across the channel. In such a situation, a magnanimous prince would either have rescued his country from its danger, or would have buried himself in its ruins. But just at the time that Cadwalader was going to embark, he was warned in a vision, which he fancied to be a sudden impulse from heaven, which directed him to lay aside the cares of the world, and go immediately to Rome, to receive holy orders from the hands of the pope. This illusion, the  
effect

effect of a weak or disordered mind, he communicated to the king of Bretaine; who, probably from interested motives, took advantage of this incident to act on the weakness of this prince, and on the credulity of his nation; which, in common with every other people in the same stage of refinement, always paid a high veneration to men, who, acting under the impulse of a warm and enthusiastic spirit, fancied themselves indued with the power of revealing future events.

‘ Having consulted the prophetic books of the two Merlins, which were deemed sacred as the pages of the Roman Sybils, Alan told him, they predicted the ruin of the British empire, until the time that the bones of king Cadwalader should be brought back from Rome. He then advised him to act up to the patriotic design, and to follow the impulse of his vision. Thus confirmed in the delusion, Cadwalader proceeded to Rome; and, agreeably to the interested views of the Roman pontiffs, was kindly received by pope Sergius. After he had submitted to have his head shaven, and to be initiated into the order of white monks, Cadwalader lived eight years as a religious recluse; exemplary in the piety of those days, but in a situation unworthy of a prince; as it secluded him from the practice of active virtue, and of consequence, from promoting the interests of his people; for which great end alone princes are delegated to rule mankind.’

In this part of the work, our author describes the modes of life, and private manners of the Welsh, whose character bears a great resemblance to that of the other Celtic nations. They are represented to be a people light and nimble, and more fierce than strong. Their chief sustenance was cattle and oats, besides milk, cheese, and butter; though they usually ate more plentifully of flesh-meat than of bread. Being little engaged in the occupations of traffic, their time was chiefly employed in military affairs. They entertained an idea that it was a disgrace to die in their beds, but an honour to fall in the field. There was not a beggar to be seen in the whole country, for the tables were common to all; and hospitality was esteemed one of the chief virtues. Pride of ancestry, and nobility of family, were extremely predominant. A Welshman was considered as honourable, if among his ancestors there had been neither slave, nor foreigner, nor infamous person. Yet if any foreigner had saved the life of a Welshman, or delivered him from captivity, he might be naturalized; and any foreign family, having resided in Wales for four generations, was entitled to the same privilege.

Our author observes, concerning Roderic, who has received from his countrymen the title of Great, that, if to produce the wealth and grandeur, the safety and happiness of a state, be the means of attaining such a title, the conduct of this



prince gave him little claim to so honourable a distinction. For Roderic, without precedent to palliate, or apparent necessity to enforce such a measure, yielded up the independency of Wales; enjoining his posterity, by a solemn rescript, to pay to the Saxon kings, as a mark of subordination, a yearly tribute, which afterwards became the foundation of the claim of supremacy, asserted by the English. Such a tribute had, indeed, been paid by the Cambrian to the British princes; but this, certainly, could impose no similar obligation upon the descendents of those Britons, who had been forced to abandon their native country to the usurped dominion of the Saxons. The division which Roderic made of his territories, proved likewise the source of civil dissensions, and national weakness, which produced in the end a decline of patriotism.

In the fourth book, our author recites the history of Wales, from the Death of Roderic to that of Bleddyn ap Cynvyn, the king of North Wales and Powis, in the latter part of the eleventh century. The bad effects of the policy of Roderic now became conspicuous: for in consequence of it, Bleddyn ap Cynvyn deigned to receive his crown from the hands of that power which was the hereditary foe of his country, and consented to hold it as a tributary of the English princes. In the next Book, we find William Rufus entering Wales with a royal army, and asserting a superiority to which he had no legal pretensions.

In the same Book we meet with the following transaction, which, in its origin, bears an affinity to an incident that produced a revolution in the Roman government.

‘ In the Christmas holidays, Cadwgan ap Bleddyn invited the chieftains in his neighbourhood to a feast at his house in Dyvet. In the course of the entertainment, medh, or mead, the wine of this country, having raised their spirits, Nest, the wife of Gerald, governor in Pembroke castle, was spoken of in terms of admiration; the beauty and elegance of whose person, it was said, exceeded those of any lady in Wales. The curiosity of Owen, the son of Cadwgan, was strongly excited to see her; and he had little doubt of obtaining admittance, as there was a degree of relationship subsisting between them. Under colour of a friendly visit, the young chieftain, with a few of his attendants, was introduced into the castle. Finding that fame had been told in her praise, he returned home deeply enamoured of her beauty, and fired with an eager desire of enjoying her. The same night, returning with a troop of his wild companions, he secretly entered the castle, and, in the confusion, occasioned by setting it on fire, surrounded the chamber in which Gerald and his wife slept. Awaked by the noise, he rushed suddenly out of bed to inquire into the cause of the dis-

disturbance ; but his wife, suspecting some treachery, prevented his opening the door ; then, advising him to retire to the privy, she pulled up the board ; and still farther assisting her husband, he let himself down, and made his escape. Owen and his followers instantly broke open the door ; but on searching the chamber, not finding Gerald, they seized his wife and two of his sons, besides a son and daughter which he had by a concubine ; then leaving the castle in flames, and ravaging the country, he carried off Nest and the children into Powis. This adventure gave Cadwgan the greatest uneasiness. Afraid, lest Henry might revenge on his head the atrocious action of his son, he came into Powis, and requested Owen that he would send back to Gerald his wife and children, as well as the plunder which he had taken. The young chieftain, whose love was heightened by the possession of his mistress, refused to restore her. Whether she yielded to the violence of her lover from choice or from necessity, is uncertain ; but he soon after sent back to Gerald all his children, at her particular request.

The sixth Book contains the narrative from the Death of Gryffydd ap Cynan to the Accession of Llewelyn ap Iorwerth ; and the seventh, from this period to the Death of David ap Llewelyn. Mr. Warrington observes, that the Welsh annals are discoloured for some years by hideous pictures of savage manners ; parents, brothers, sons, engaging with each other in fierce and unnatural contests. But with the delicacy becoming a judicious historian, he has drawn a veil over those scenes of horror, which could only prove disgusting to humanity. His attention is bestowed on national objects ; and, in the course of his narrative, we behold the Welsh exhibiting the most magnanimous efforts for the liberty of their country. Sometimes, by a sudden vicissitude of fortune, they rise to the height of prosperity ; and at other times, in a moment, sink into disunion and vassalage.

The eighth Book contains the history from the Accession of Owen and Llewelyn, the Sons of Gryffydd ap Llewelyn, to the Death of Llewelyn, the last Prince of North Wales : and the ninth, from the Accession of David ap Gryffydd, to the entire Conquest of Wales. This important event was accomplished during the reign of Edward the First, after an obstinate struggle with several preceding kings of the Norman race. The people of both nations can now reflect with composure, on those violent animosities which actuated their ancestors through a series of ages ; and even the descendants of the vanquished will readily acknowledge, that the eventual introduction of justice and order into their country, has more than compensated for the abolition of their ancient and long disputed independency. These salutary effects, however, must

be ascribed entirely to the ambition, not to the virtue or magnanimity of the English monarch. For his conquest of the Welsh was sullied with an act of barbarity, which could be suggested only by the policy of a tyrant, the most atrocious and illiberal: we mean the massacre of the Welsh bards. Of this class of ancient Britons our author has favoured us with a short history, which he relates with the same perspicuity and precision as the former parts of the work.

A transcript of various national documents, partly in English, partly in Latin, relative to Wales, are subjoined in an Appendix to the work.

In an age, when the industry of writers has pre-occupied every fertile field in the regions of history, Mr. Warrington has happily taken possession of a mountainous tract, never before cultivated with any suitable degree of application. The detail of provincial transactions is not a subject which necessarily calls forth the exertion of the most vigorous abilities; but we may perceive the display of genius on a small, as well as on an extensive theatre; and we cannot hesitate to conclude, that he who has treated of the affairs of Wales with such dignity of style, and propriety of sentiment, is qualified for the attainment of applause in more important departments of history.

*The Heiress. A Comedy, in Five Acts. As performed at the Theatre-Royal, Drury-Lane. 8vo. 1s. 6d. Debrett.*

**I**F the end of comedy be to represent, with fidelity, the manners of the world, and not only to catch the reigning folly of the day, but to delineate the minuter features which distinguish the period of the author, the *Heiress* has considerable claims to our applause, and we can join in the general acclamations of the crowded theatre. The characters of this play are properly varied, and often contrasted with peculiar skill: the situations are perplexing, without too studied intricacy; and the language is lively, elegant, and polished. In short, if we try our author on one part only of the statute, he will be acquitted with honour, and his trial be terminated with applause. In other views, he will not be equally successful. Novelty of character, peculiar and striking situations, and a suspense, which stands on tip-toe, eager for the denouement, we in vain look for: but perhaps it may be fastidious to expect too much; and, if we are gratified both with the progress of the story and the event, we ought not to complain of the source from which our gratifications are derived.

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The story is a common one. Lord Gayville is designed by his uncle for a rich heiress, the daughter of an attorney, mean, vulgar, and unfeeling; but ostentatious and ambitious. He pursues miss Alscript only for her wealth; yet, accidentally meeting miss Alton, becomes sensible that wealth alone cannot fill the void in a feeling heart. Though this lady appears in a low situation, his dishonourable advances are checked with a decided firmness, and a virtuous resolution. His tutor, friend, and companion Clifford, loves lord Gayville's sister, lady Emily; but, conscious of his situation, 'adores her' as a star, 'which he can never hope to reach:' she, in return, sees his merits, and is sensible of their effect; she is, however, under the eye of a shrewd, suspicious uncle, and, fearing to discover her sentiments, veils them under the mask of a lively fashionable gaiety. Miss Alton, to avoid Gayville, seeks for the protection of some lady, with whom she may remain as a humble companion: she is, by chance, directed to miss Alscrip, who receives her with a haughty dignity; and she is treated by the rest of the family with the most familiar illiberality. Gayville, having lost his favourite, visits miss Alscrip, who, in a fit of ill-humour, sends her confidante to him to *double* her, 'like a second actress at Paris, when the first has the vapours.' She goes, and sees in lord Gayville her former persecutor, whom she had known only by the name of Heartly. He immediately addresses her with warmth and affection, is discovered by miss Alscrip, who chuses to see how her *double* performs, and leaves them, assuring the latter that he can no longer offer her his heart.

In the mean time, Clifford and sir Clement are endeavouring to prevent the progress of Gayville's new connection: they go to Alscrip's, and, by the address of the Frenchman, who has himself a *tendre* for 'mademoiselle la Musicienne,' are introduced to Tiffany, miss Alscrip's waiting-maid, instead of miss Alton. She is pert and saucy at the first enquiries of Clifford; but, being interrupted, desires him to put his proposals in writing. This confirms them in the opinion, that Gayville's object is an adventurer, and Clifford writes to her by the name of miss Alton. The Frenchman, by whom the letter is also sent, suspects, from the ambiguity of Clifford's language, that his trick is discovered, and faithfully delivers it as directed. Miss Alton is extremely agitated with her unexpected happiness, for she finds it comes from her brother. She had been left under the protection of an uncle, from whom she escaped, on his attempting to force her to marry a man she detests. She discovers herself to her brother; he conveys her from miss Alscrip's, and conceals her in his own

apartment at Gayville's. Sir Clement's suspicious temper leads him, in the course of the transactions relating to the marriage settlements, to insist on seeing a particular deed, for which Alscip, in a hurry, puts another into the hands of his attorney; and, by this rather too artificial contrivance, discovers that a considerable estate really belongs to Clifford: his grandfather, to whom Alscip was steward, and at last creditor, having had no right to dispose of it. The event is now obvious, though the piece is not immediately concluded; probably on account of the length which has been arbitrarily assigned to every regular play: the rest is filled with some explanation of the mistakes which have occurred. This part is dextrously managed; for, instead of the wounded snake dragging its slow length along, the concluding scenes are not inferior to the other parts.

This outline will seem to afford nothing very interesting; and, in meaner hands, would have scarcely deserved attention. General Burgoyne, however, has had the address to vary common characters, so as to give them an appearance of novelty: he has coloured his sketch with a masterly pencil; and drawn a discriminated likeness, which gives the most lively impression of real life. The suggestions of jealousy, expressed by Sir Clement, are pointed, and apparently well founded; Clifford, with the most disinterested integrity, is occasionally in such an equivocal situation, as to justify the doubts of a man who may have suffered by pretended honesty, or at least endeavours to vindicate his claim to sagacity, by a propensity to suspicion. Lady Emily is not the romantic heroine of a novel; though she loves with tenderness, she disguises a feeling heart by affected gaiety; and, instead of yielding without resistance, instead of pining in secret, she is brought more near to a real character, by being represented as a lady who joins in the circle of fashionable pleasure. Lord Gayville and Clifford, Miss Alscip and her father, are common figures; but the characters are well preserved, and they are brought forward with great propriety. Indeed we have seldom seen a play, where the appearance and part allotted to each person is so justly proportioned to their real importance. We too commonly perceive one figure magnified to a gigantic stature, and the others placed at a humble distance, curtailed in their size, effect, and importance. There are two other characters which fill up the piece, though, as they are of no great consequence to the general story, they did not occur in the outline. These are Blandish and his sister, two infamous parasites, attached to Lord Gayville and Miss Alscip. We can only observe, that they seem copied from real life; and we suspect,

suspect, are too often met with there : we do not mean that they are designed for particular persons ; but, to speak in the language of natural history, they are species rather than individuals.

We have before remarked, that the great hinge on which the change of fortune turns, is too artificial. It is improbable, and is not the only circumstance which deserves that title. But we shall not dwell on imperfections, particularly on those which almost disappear in the representation ; the truest criterion of the excellence of a comedy, and which are not very obvious or striking blemishes, even in the closet. Indeed we may conclude, that if this comedy is not the first in our language, or even in the first line, it possesses considerable merit ; and we have little doubt but that it will continue a favourite with the public, as it has already enjoyed such distinguished tokens of approbation.

It is not easy to select a specimen. Perhaps the following can be more easily separated from the rest. Lady Emily, it is to be remembered, in a dejected state endeavours to lose her own thoughts, in a trial of fashionable extravagance with miss Alscrip.

*Enter Miss Alscrip and Mrs. Blandish.*

*Miss Alscrip runs up to Lady Emily and kisses her forehead.*

*Lady Emily.* I ask your pardon, madam, for being so awkward, but I confess I did not expect so elevated a salute.

*Miss Alscrip.* Dear lady Emily, I had no notion of its not being universal. In France, the touch of the lips just between the eyebrows has been adopted for years.

*Lady Emily.* I perfectly acknowledge the propriety of the custom. It is almost the only spot of the face where the touch wou'd not risk a confusion of complexions.

*Miss Alscrip.* He ! he ! he ! what a pretty thought !

*Mrs. Blandish.* How I have long'd for this day !—Come, let me put an end to ceremony, and join the hands of the sweetest pair that ever nature and fortune marked for connection. (*Joins their hands*).

*Miss Alscrip.* Thank you, my good Blandish, tho' I was determined to break the ice, lady Emily, in the first place I met you. But you were not at lady Doricourt's last night.

*Lady Emily (affectedly).* No, I went home directly from the opera : projected the revival of a cap ; read a page in the 'Trials of Temper ; went to bed, and dream'd I was Belinda, in the Rape of the Lock.

*Mrs. Blandish.* Elegant creature.

*Miss Alscrip (aside).* I must have that air, if I die for it. (*imitating*) I too came home early ; supped with my old gentleman ; made him explain my marriage articles, dower, and heirs entail ; read a page in a trial of divorce, and dream'd of a rose-



colour equipage, with emblems of Cupids issuing out of coronets.

‘ *Mrs. Blandish.* Oh, you sweet twins of perfection! what equality in every thing! I have thought of a name for you—The inseparable inimitables.

‘ *Miss Alscrip.* I declare I shall like it exceedingly—one sees so few uncopied originals—the thing I cannot bear—

‘ *Lady Emily.* Is vulgar imitation—I must catch the words from your mouth, to shew you how we agree.

‘ *Miss Alscrip.* Exactly. Not that one wishes to be without affectation.

‘ *Lady Emily.* Oh! mercy forbid!

‘ *Miss Alscrip.* But to catch a manner, and weave it, as I may say, into one’s own originality.

‘ *Mrs. Blandish.* Pretty! pretty!

‘ *Lady Emily.* That’s the art—Lord, if one liv’d entirely upon one’s own whims, who would not be run out in a twelve-month?

‘ *Miss Alscrip.* Dear lady Emily, don’t you doat upon folly?

‘ *Lady Emily.* To extacy. I only despair of seeing it well kept up.

‘ *Miss Alscrip.* I flatter myself there is no great danger of that.

‘ *Lady Emily.* You are mistaken. We have it’s true, some examples of the extravaganza in high life that no other country can match; but withal, many a false sister, that starts as one wou’d think, in the very hey-day of the fantastic, yet comes to a stand still in the midst of the course.

‘ *Mrs. Blandish.* Poor spiritless creatures!

‘ *Lady Emily.* Do you know there is more than one duchess who has been seen in the same carriage with her husband—like two doves in a basket in the print of Conjugal Felicity; and another has been detected! I almost blush to name it.

‘ *Mrs. Blandish.* Bless us, where? and how? and how?

‘ *Lady Emily.* In nursing her own child.

‘ *Miss Alscrip.* Oh! barbarism!—For heaven’s sake let us change the subject. You were mentioning a reviv’d cap, lady Emily; any thing of the Henry quatre?

‘ *Lady Emily.* Quite different. An English mob under the chin, and artless ringlets in natural colour, that shall restore an admiration for Prior’s Nut brown Maid.

‘ *Miss Alscrip.* Horrid! shocking!

‘ *Lady Emily.* Absolutely necessary. To be different from the rest of the world, we must now revert to nature; make haste, or you have so much to undo, you will be left behind.

‘ *Miss Alscrip.* I dare say so. But who can vulgarize all at once? what will the French say?

‘ *Lady Emily.* We are to have an interchange of fashions and follies upon a basis of unequivocal reciprocity.

‘ *Mrs.*

‘ *Miss Alscrip*. Fashions and follies—oh, what a promising manufacture!

‘ *Lady Emily*. Yes, and one, thank heaven, that we may defy the edict of any potentate to prohibit.

‘ *Miss Alscrip* (with an affected drop of her lip in her laugh). He! he! he! he! he! he!

‘ *Lady Emily*. My dear miss Alscrip, what are you doing? I must correct you as I love you. Sure you must have observed the drop of the under lip is exploded since lady Simpermode broke a tooth—(Sets her mouth affectedly)—I am preparing the cast of the lips for the ensuing winter—thus—It is to be called the Paphian mimp.

‘ *Miss Alscrip* (imitating). I swear I think it pretty—I must try to get it.

‘ *Lady Emily*. Nothing so easy. It is done by one calabistical word, like a metamorphosis in the Fairy Tales. You have only, when before your glass, to keep pronouncing to yourself nimini-primini—the lips cannot fail of taking their plie.

‘ *Miss Alscrip*. Nimini-pimini—imini, mimini—oh, it’s delightfully enfantine—and so innocent, to be kissing one’s own lips.

‘ *Lady Emily*. You have it to a charm—does it not become her infinitely, Mrs. Blandish?

‘ *Mrs. Blandish*. Our friend’s feature must succeed in every grace; but never so much as in a quick change of extremes.’

## FOREIGN ARTICLE.

*Histoire de l'Academie Royale des Sciences Année 1781, avec les Memoires de Mathematique & de Physique pour la même Année, Paris, 4to. 1784. (Concluded, from p. 64.)*

WE must go on with M. Lavoisier.—This dextrous and enterprising chemist, in the next Memoir, examines the constitution of fixed air: it is intended to give a stability and a roundness to his general system. But he approaches nearer to the old principle of Stahl; and, as the historian hints, the two contending sects may one day unite: they seem already, by their mutual gravitations, to tend fast towards an union. The principle which, in vital air, forms with sulphur and phosphorus their peculiar acids, he styles the oxygenous principle, because he finds it again in the nitrous acid, formed by the mixture of nitrous and vital airs; and he hopes to find it in fixed air. Coal, he observes, contains earth, fixed alkali, and inflammable air, with a substance wholly combustible, which (mark him reader), he calls a *coaly substance*. He burns coal in a vessel, full of vital air, with some alkali (the caustic volatile alkali) to absorb the air, and expects to find the fixed air equal  
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to the coaly substance lost, and the vital air absorbed. There was, however, a difference; for some of the inflammable air of the coal had formed water by its union with the vital air. When this was allowed for, he found the fixed air composed of seventy-one parts of vital air, or its oxygenous principle, and twenty-nine of coaly matter. The water was properly accounted for, since when the coal had been previously deprived of its inflammable air, no water appeared, and the result was the same. He then used wax, which he found wholly composed of a *coaly substance* and inflammable air: water was formed, and fixed air appeared to consist of the same proportions. Other experiments, with minium and mercurius precipitatus per se, after proper allowances, give the same result; and thus the author establishes the formation of the peculiar acid from vital air, and a combustible body; or rather of the oxygenous principle of this air, for light and heat escape in the experiment. We think, however, that he has, with unusual precipitation, hastened to his conclusion; for this combustible body should have been more particularly examined. He has only proved, that vital air is necessary to the production of fixed air; which might have been supposed from its being an acid: in the rest of the argument there is still much obscurity.

Mons. Bertholet, in the following Memoir, examines the decomposition of nitre by distillation. In this process, vital air arises equal in weight to half the salt; a little fixed air at first, and phlogisticated air at last, seem to contaminate it. This phlogisticated air is often called by the modern French chemists *air reduit*, because it remains after the separation of the different parts of atmospheric air, viz. the vital and fixed airs. We shall beg leave to introduce a new term, and call it the *residuum of air*. A fixed alkali, as may be expected, remains in the retort. Some nitre sublimes in the experiment; but, if there is not a free communication between this sublimed salt and the vital air, it resembles the neutral, formed by nitrous air and the alkali. When the nitre was decomposed, by adding three grains of coal to each drachm of the salt, (the coal being previously deprived of its air by distillation, it gave no longer pure air, but an air mixed with fixed, and the residuum of air; when the proportion of coal is increased, these impurities are in greater quantity. With sulphur and arsenic he obtained nitrous air; with metals, fixed air, in proportion to the quantity added. This last fact seems to deserve more attention than has been paid to it. From these experiments our author concludes, that nitrous air is the acid, with a superabundance of phlogiston; and the residuum of air and fixed air are supposed to be only vital air, with different proportions of the same principle.

In a mixture of mineral acids, whether designed or accidental, messrs. de Laffoune and Cornette found that the heaviest may be obtained very pure by distillation, if the operation



is carefully carried on, and the products diligently separated. If the acid is weak, the watery parts first come over; but if already pretty strong, the most concentrated parts appear about the middle of the operation. These facts are highly useful.

Our neighbours, who carry their science into many seemingly trifling subjects, under the term analysis, have included memoirs of an uncommon kind. The chevalier Borde observes, that in elections, by scrutiny, if there are three candidates, it may happen that the successful one has not the majority. If there are twenty-one voters; A has eight, B seven, and C six; A gains the election, though eight is a number very distant from a real majority. The rule he gives to obtain the real majority is the following. The number of voices for the successful candidate must be in a greater proportion to the number of electors, than that of the number of candidates, *minus* one to the whole number. It is remarkable that this is the rule observed in the election of the kings of Poland, where the number of candidates equals, and sometimes surpasses, the number of electors.

The next Memoir is apparently trifling, yet it is only determined by the properties of the hyperbola, and some very curious applications of the differential calculus, or the method of fluxions. In carrying earth from one place, to lay it in an equal space, it is evident that both trouble and expence may be saved. The force to be employed is equal to that of the masses, multiplied by the space through which each load is carried; but this sum must vary, according to the distribution of the loads. The object of mons. Monge is to ascertain the method in which the sum mentioned is the least possible. Our readers will scarcely wish that we should follow the author in this calculation.

The next Memoir under this head, by the marquis de Condorcet, is more important. It is on the Calculation of Chances. It is well known, that in estimating risks which are unequal, or unequally probable, the value must be multiplied by the probability. This rule gives only the mean value; but there are two exceptions which the marquis considers, first, where the equality between the real and mean values, which the rule, taken strictly, supposes to be the same, is delusive; secondly, where there is no possibility of substituting the real for the mean value. These exceptions do not often occur; but they deserve to be examined. The second part of the Memoir is still farther from 'mens business and bosoms.'

Under the head of Mechanics, we find some remarks on the ascensional power of air-balloons. They were the last legacy of the celebrated and venerable Euler, whose black board (mathematicians will understand us), was covered with calculations, which his eyes could scarcely discern, though written with chalk. The force of his mind still remained, while the springs of life were ready to break. Euler, however, considered balloons as sub-

subjects of calculation only; and his labours were soon interrupted by an irresistible power.

The next Memoir, in this department, is by mons. Coulomb, on Wind-mills. It is well known, that the most advantageous angle for the sails, is a problem which has exercised the ingenuity of mathematicians; yet, by 'dint of feeling their way,' practical mechanics have arrived nearly at the same results. The mills near Lille are simple in their construction; like the English fulling-mills, which differ only by being moved with water, and their force is easily calculated. They work eight hours in a day, by the action of a wind, which passes on at the rate of twenty feet in a second, and with a force capable of raising one thousand pounds, at the rate of two hundred and eighteen feet in a second. Sixty-one men, according to Bernouilli's calculation (in which our author thinks the strength of a man, in *continued labour*, is over-rated), would be required for the same purpose. The quantity of force lost is about a sixth of that which is employed with advantage. M. Coulomb was prevented by the jealousy of the several owners, from examining the mills with accuracy; and he requests the assistance of others, who may be more fortunately situated. He desires that the effects of the machine, and a calculation of the forces, may be added to the description. He purposes to apply these experiments to the investigation of a theory of these machines, which has been sought, in vain, *a priori*.

The last mechanical Memoir is a Description of a new Species of Telescope Level, by M. de Fouchy. The telescope is formed of two object and an eye-glass; with four glasses our author could not succeed. The description would be unintelligible without the plate.

In analytical astronomy, M. du Sejoir endeavours to determine the parallax of the sun, from the transits of Venus in 1761, and 1769. He makes it  $8'' \frac{7}{10}$ . If we recollect rightly, the English astronomers found it somewhat less, though it exceeded eight seconds. The difference in the results, from the two observations, did not amount to the fiftieth part of a second.

In calculating the quantity of the precession of the equinoxes, mons. de la Lande prefers a series of modern observations to the less accurate, though more distant ancient ones. He compares Flamsteed and de la Caille's Catalogue of Stars, and neglects those of the first magnitude, as they seem to have some motions peculiarly their own. He calculates from those which have been most steadily and accurately observed among the smaller stars; and the results, in different trials, were nearly the same: by taking the mean of these, he fixes the quantity of precession at  $50'' \frac{1}{4}$  every year.

Eclipses, which by calculation are total, sometimes appear annular, in consequence of the inflection of the solar rays, when they pass near the body of the moon. The quantity of  
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this inflection, *monf. le Monnier* calculates, from some observations, to exceed twenty-four seconds. Other astronomers have reckoned it, by different methods, to be about three seconds. This variation is supposed to be owing to the refraction of the rays from a lunar atmosphere.

*M. Coles* observed an eclipse of the fourth satellite of *Jupiter*, at *China*, in very favourable circumstances. From thence he calculates the inclination of its orbit to be  $2^{\circ} 36' 24''$ . He differs but  $24''$  from the calculations of *messrs. Wargentin* and *Maraldi*.

*M. de Fouchy*, in the following Memoir, describes a new quadrant, which is neither dearer or of more difficult conveyance than the common quadrant; at the same time it serves as an azimuthal instrument. If this new instrument, of which there is a plate, can be easily made and used, as seems probable from the description, it will be highly advantageous.

There are also in the Memoirs, Observations on the Eclipses of the sun, on the 23d of April, and 17th of October, 1781, by *M. Monnier*; on the last of these are other observations by *messrs. Jaurat* and *Pingré*. The paths of the two comets of 1781, are also described, and traced on an Atlas, by *M. Messier*. But these Memoirs cannot be with advantage enlarged on.

The last Memoir is on the Position of *Trebizonde*. *D'Anville*, and every other geographer, had been consistent in fixing the longitude of this place; but in the Atlas, engraved for *Raynal's Philosophical History*, it is placed  $5\frac{1}{2}$  or 6 degrees farther to the east. This was done on the authority of a Memoir, published in the Memoirs of the Academy 1699, by *M. Gouye*, from the Observations of father *Beze*. *M. Buache* examines the effect of this variety on the Caspian sea. The northern part must be stationary, for the latitude of *Guriew*, at the mouth of the *Jaik*, is fixed by astronomical observations, and this change will place it in an oblique position, and make its length five times greater than its breadth. These two circumstances are inconsistent with the account of every intelligent traveller, and the change in the situation of other places renders the alteration, on similar accounts, equally objectionable. Besides, in the Memoir referred to, the result of the calculations are only given; so that we cannot decide on their value, or be secure from mistake. On the other hand, in page 6 of the Atlas, we find several strong reasons for the position they have determined on, though not sufficient to counterballance the arguments of *M. Buache*; and, in the following page, we find the authors with difficulty reconciling the positions of *Constantinople* and *Smyrna*, to the new place of *Trebizonde*, consistently with the observations of *de Chazelles*, and father *Feuillée*. On the whole, we think the Memoir before us deserves attention; and we have been more particular in our account of it, as we begin to find the authority of *Raynal's* maps quoted in England with a respect which they do not always deserve. In  
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general,



general, they are sufficiently accurate; but, in more than one instance, they deserve reprehension.

The lives, or more properly the eulogiums in this volume, are those of the learned, but the timid and indecisive Bertin, who was chiefly known and celebrated as an anatomist; le marquis de Courtanvaux, a learned academician, who had no particular predilection for any science, but a competent knowledge of all; mons. le compte de Maurepas, a minister at the ages of fourteen and of eighty; and the sagacious Tronchin, the friend and physician of Voltaire, Bonnet, Trembley, and Rousseau. These Lives are written with spirit and with elegance; but with too much complaisance, and too little discrimination.

## MONTHLY CATALOGUE.

### P O L I T I C A L.

*The Principle of the Commutation-Act established by Facts.* By Francis Baring, Esq. 8vo. 1s. Sewell.

AMONG the many frivolous publications on political subjects, we sometimes find them treated of by men of real knowledge. The information, of which the public is then in possession, more than compensates for the wrong judgments that must necessarily result either from unfairness or ignorance. The general effect of the measure which is the subject of this pamphlet, is sufficiently felt and understood; yet it will be allowed, that Mr. Baring, from professional habits of calculation, and his station in the India company, is particularly qualified to write on the commutation-tax, with which he seems to have been acquainted, when it only existed in design. In consequence of his having been early prepossessed in favour of it, and from its success, he rejoices as an author, and a good citizen.

The author of these sheets, he says, writes neither from party views, nor upon party principles. The only connexion he ever had with the treasury arose from his being employed in a very considerable simplification of the public expenditure, in the business of supplying the whole of the army victualling contracts, during the time that the marquis of Lansdown presided at that board. The execution of that great and important work, together with his situation in the city, naturally led to his being confidentially consulted respecting other affairs, of a commercial nature, which were either depending, or in contemplation. The tea-proposition (which was presented to his lordship by Mr. Richardson, of the East-India house),

house), and many other plans were then in agitation; and more or less progress was made in them, as time and other circumstances would permit. The proposition respecting the duties upon tea was also communicated to several principal persons belonging to the excise and customs, and to others who were competent to judge of its merits; and was generally approved; Under these circumstances, the author's most sanguine wishes were early embarked in the success of this measure; and it affords him the greatest satisfaction to declare, that he feels himself infinitely gratified by the event.'

He gives an account of the quantity of tea usually sold by the company, before the act passed, which, on an average, amounted to six millions three hundred and fifty-eight thousand one hundred and forty-four pounds annually. The sale of last year was sixteen millions one hundred and fifty-two thousand six hundred and seventy: we cannot abridge calculations; suffice it to say, the public has gained, by lowering the duties, two millions fifty-five thousand four hundred and sixty-two pounds. Those who want to see the particulars, will be fully gratified by consulting the pamphlet. The author next enters on the produce of the house-tax, &c. but for this we must also refer to the pamphlet. He says that

'The situation of the India company is so completely reversed by the commutation act, and so entirely are they relieved from the difficulty which would have arisen from the circumstance before mentioned, that, in order to guard against even the possibility of a deficiency in the quantity necessary to answer the increased demand of the public, the company have been obliged to have recourse to the continent; and have actually purchased, of the tea which was in Europe previous to the year 1784, and of what arrived in that season, about  $\pounds$  6,600 000; and the vigorous efforts which they are making in the present season, for the purpose of importing a sufficient quantity directly from China, in order to preclude the necessity in future of depending on their rivals for a supply, will afford the means, in due time, of securing, both to the nation and to the company, the whole of those important advantages, which have already in part arisen from this measure, and which the public have a right to expect.'

After some other necessary detail of calculation, he observes, that the company have gained three hundred and eleven thousand nine hundred and five pounds; a considerable part of which, it seems, arises from the high prices at which some sorts of teas have been sold, and which the directors have exerted their utmost endeavours to prevent. As it is so much for the interest of the smuggler that the company's tea should be sold dear, we may fairly presume, that it was pushed

up at the sales by unfair practices. The public loses immensely by illicit trade in this article, no less a sum than one million seven hundred and thirty-four thousand nine hundred pounds having been paid to smugglers, which is now turned into the channel of the fair trader.

‘ To those who are skilled in political arithmetic, the advantages which must result from so large a balance being thrown into the lap of this country, by so simple an operation, are obvious. The wonderful effect which it has contributed to produce upon the foreign exchanges, by reducing the price of gold and silver, is matter of the utmost importance and advantage to the Bank of England, as well as to the public. And although the demand for our manufactures, &c. together with the general prosperity of the British empire, have also contributed thereto; yet that demand must fluctuate; whilst the balance which this kingdom will possess, arising from the beneficial consequences resulting from the commutation-act, will be permanent and lasting; if the legislature shall, on their part, adopt such measures as are calculated to secure and perpetuate the benefits so obtained; and which it is most indubitably in their power to do.

‘ The late rapid advance in the value of property is a subject of astonishment with many persons; and, without ascertaining precisely the whole of the cause, there cannot be a doubt, but that two circumstances have, in a most essential manner, contributed thereto; namely, the great influx of wealth, which has increased the number of purchasers; and the confidence, which augments daily, in the public funds, from the prospect of the taxes becoming more productive, in consequence of the suppression of smuggling.

‘ At the same time, the great and unexpected success which has attended a single measure, will naturally lead the true friends of the first commercial country in the world to wish to pursue the advantage so happily obtained; and to adopt, as a general maxim, for the whole of our commercial system, the same principle, which has been attended, in its first application, with such great and salutary benefits to the trade, finances, public funds, and landed interest of the kingdom at large.’

The author goes on to mention other advantages, particularly in the application of the surplus of the Bengal revenue, for the purchase of tea in China; and, by that means, to lessen the exportation of bullion from home. He says, that the increase of the tea-trade will require forty-five additional ships, and employment for three thousand four hundred and fifty men; which, abstracted from every other consideration, must make it an object of vast national concern.—He concludes by justly observing,

‘ These



'These advantages, which have arisen from a single operation, are of such magnitude and importance, as to satisfy every impartial person of the beneficial consequences which must result from a general application of the same liberal principle to the duties still subsisting upon various branches of the manufactures and commerce of Great Britain.'

From this specimen, the reader will no doubt think the whole pamphlet worthy of his perusal and attention.

*A Short Address to the Public; containing some Thoughts how the National Debt may be reduced, and all Home Taxes, including Land-Tax, abolished. By William, Lord Newhaven. 8vo. 1s. Debrett.*

The reduction of the national debt is a problem which has exercised the ingenuity of many political writers; and, what is remarkable, on a subject so much agitated, not two of them correspond entirely in the methods proposed for the purpose. Amidst the discouragement arising from this diversity of opinion, however, it is some consolation to find, that each of those public-spirited enquirers seems not to entertain any doubt with respect to the practicability of the plan suggested by himself. It always affords us particular pleasure, when, in our monthly progress, we meet with a nobleman employed in so laudable a speculation. By this conduct, such an author not only evinces a patriotic anxiety, highly becoming his elevated rank, but sets an example to those who have leisure and opportunity for prosecuting researches of the same kind.

The commissioners of the public accounts, in their Eleventh Report, having occasion to speak of the national debt, expressed a desire that recourse might be had to public benevolence, for discharging this enormous incumbrance. Proceeding upon a plan of a similar kind, lord Newhaven proposes, that all the subjects of Great Britain should pay a certain annual rate out of their real and personal property; and that this sum should be faithfully applied to the liquidation of the public debt. According to the calculation which he institutes, the amount of the sum proposed to be thus levied would be so great as to discharge the whole debt in a very few years. As a compensation for this extraordinary advance of money, he farther proposes, that all internal taxes whatever should be abolished, after the first payment of one per cent. was made at his majesty's exchequer. His lordship observes that, according to this scheme, no individual will pay near so much on his rental or expenditure as he now does for taxes of every kind, and be relieved from the perpetual irritation and disquietude of tax-gatherers of every denomination.

To the plan above mentioned there naturally arises this question, if the home taxes are abolished, how are the army, navy, and the various departments of the civil government to be provided for? To this his lordship replies, that as he concludes

foreign nations will not take off the duty on our commodities imported into their respective countries, he proposes to continue the duty on goods imported, which he thinks will be nearly adequate to defray all expences, civil and military, in time of peace.

Such is the plan suggested by lord Newhaven for reducing the national debt; a plan, we must confess, not less bold and interesting in the conception, than apparently difficult of being enforced to the extent proposed by the noble author. In order to be adopted, there seems reason to think it would require an universal apprehension of danger the most imminent to the state, and such as threatened the extinction of government. At least, it appears to be so arduous in the execution, that it could only be accomplished by unparalleled alacrity, and a general spirit of patriotism, that has sometimes, indeed, blazed forth, in war, among a people in the most desperate circumstances, but which there is little hope of ever being kindled by the prospect of any civil emergency, not immediately destructive of public freedom. The proposal, however, affords a proof of his lordship's zeal for the public interests; and we sincerely wish that his meritorious example might excite that ardour which it ought to inspire in all the true lovers of their country.

*An Address to the Landed, Trading and Funded Interests of England on the Present State of Public Affairs.* 8vo. 1s. 6d. Stockdale.

This author takes an extensive view of the present state of the nation; but rather by a random excursion than with any precise and accurate enquiry. In every department which he considers, he meets with objects which excite his apprehension. Our specie is drained out of the kingdom, in annual payments to foreigners, who have property in the public funds; the landed interest is groaning under insupportable burdens; and the national debt is accumulated to so extreme a degree that it threatens to become fatal. For remedying these disasters the author proposes an equal representation of the commons in parliament, and a total abolition of duties at the custom-house. The effect of the former of these measures, towards removing the evil complained of, our author has not thought proper to explain; and how the extinction of the custom-house duties, while so great a part of the public revenue is necessary for paying the interest of the national debt, should restore our prosperity, is a proposition which, we must own, appears not very compatible with sound argument. We are inclined, however, to impute the motives of this address entirely to the author's impartial sentiments; for, though not a profound politician, he appears to be a candid writer, and to wish well to the interests of the nation.

'Tis all my Eye. 8vo. 1s. Wilkie.

This pamphlet is addressed to Archibald Macdonald, esq. on account of its relating to the police of Westminster, concerning which, a motion was made by that gentleman during the last session of parliament. The author makes some just observations on particular topics; but he seems to be no friend to the establishment of a new jurisdiction; contending, that a proper enforcement of the existing laws are sufficient for the preservation of order. Should we admit this to be really the case, it must follow, that the remissness of the magistrates in the discharge of their duty deserves the severest reprehension.

*Collection of Acts passed in the State of Massachusetts Bay, relative to the American Loyalists and their Property.* 8vo. 1s. Stockdale.

The wisdom and policy of these laws can be no object of attention to our readers; and it is, therefore, sufficient for us to observe, that the work appears to be authentic.

## M E D I C A L.

*Medical Cautions, for the Consideration of Invalids; those especially who resort to Bath.* By James Makittrick Adair, M. D. 8vo. 3s. 6d. in Boards. Dilly.

It is rare to see a volunteer start up from among the discharged invalids; but our author tells us that he is independent of business, and a 'volunteer' in some of its branches. We think, however, that he has been well employed in publishing this work, which contains good sense, just reasoning, some humour, with little novelty, and a few occasional errors.

His observations on Fashionable Diseases, are acute and humorous; on the Effects of hot crowded Rooms, and noxious Air, solid and judicious. The Essay on Regimen, and the Enquiry into the Propriety of using other Remedies during a Course of Mineral Waters, contain many useful observations, which, with a few exceptions, we would strongly recommend. The Essay on Empiricism also deserves great attention; but empiricism is now the fashion, and, like Antæus, will only raise, with fresh strength, from every attempt to overthrow it. We cannot refrain from extracting the following spirited, and, we fear, well founded censure.

'When physicians (I do not mean quack doctors) adopt extraordinary modes of obtruding themselves and their wonderful abilities on the notice of the public, it would be no breach of charity to place them on the same form with nostrum-mongers; and the similarity is more obvious, as, in both instances, the merits of the regular doctor and his brother quack are always much exaggerated; whilst that public, to which the



appeal is made, is equally unqualified to judge of either. It is with regret, mingled with indignation, that I thus animadvert on the conduct of such of my brethren as have justly incurred this censure. In the preceding essay I took notice of their illiberal treatment of the Bath physicians; and it may fairly be presumed, that they are of the number of those, who, conscious of deficiency in personal merit, endeavour to compensate for that deficiency by cultivating, most assiduously, the good graces of apothecaries, midwives, nurses, abigails, toad-eaters, and puffing gossips. But, not contented with this indirect attack on their brethren, they generally proceed to direct hostilities, and by the dark and malignant insinuations of themselves or their emissaries, endeavour to blast the reputations of all their competitors. This serious charge may, by some of my readers, be deemed incredible; but it is not less true. Such ungentlemanly arts may reasonably be considered as truly empirical, and those who practise them as swindlers of reputation, and therefore greater pests of society than swindlers of property; inasmuch as they, in a great degree, deprive the public of the services and talents of modest men, who are generally as much their superiors in ability as in urbanity. That I may, in some degree, qualify the severity of this stricture, I take, with pleasure, this opportunity of declaring, that as I consider my profession as a most useful and respectable science, so I have a most sincere and affectionate attachment to all such of my brethren as discharge their duty with honour and integrity.'

When we recommended the treatise on Regimen, with some exceptions, we meant not to avoid particulars. Butter, even in a melted state, is allowed by our author; and roasted meats are preferred to boiled. We suspect that he is mistaken both in his reasoning and facts. There is some empyreuma always contracted by melting butter; and the fat of roasted meat is often strongly empyreumatic. In these respects, both must be injurious to invalids; but we would refer to experiment. Hectical patients are more easily and quickly affected by the least disorder in the stomach, the least impediment in digestion, than any others. With these we have always found melted butter and roasted meat produce a considerable febrile exacerbation; and of course they have been generally forbidden. A meal of flesh meat has frequently occasioned less disturbance than melted butter with their vegetable food. Even butter, in its solid state, is not easily assimilated.

In the table of foods, which are arranged according to their digestibility, we also find some errors. Oysters, when fresh and small, are more easily digested than any other shell-fish, or than any other animal food. We speak from frequent observation, and suspect that our author has been misled by Sanctorius and Keil. Crabs are more digestible than lobsters; and  
flounders

flounders than whittings. We would refer our author to the experiments annexed to the first volume of the translation of Spalanzani's Dissertations, for some farther corrections in his table. On the whole, we think this work may be highly beneficial; and it deserves our recommendation.

## D I V I N I T Y.

*The Character of Jesus Christ: a Sermon, by George Skene Keith, M. A. 8vo. 1s. Evans.*

In the first part of this discourse (for it is divided into two), we think some points of our Saviour's character injudiciously represented, and that there was no reason for exalting his miracles at so much expence of those of Moses and the Jewish prophets; for which conduct, we doubt whether the apology the author makes be sufficient.—We are not always contented with Mr. Keith's style. Instances occur where it is too turgid; others, where it is too familiar. We are suspicious that the following passage aims at the sublime. Having told us, from St. John, that *Jesus first groaned and wept, and then cried out with a loud voice, Lazarus, come forth*, our author adds 'That all Nature heard through all her works—Heaven heard and was astonished—Earth heard and rejoiced—Hell heard and trembled—Death heard and fled—the grave heard and opened—Lazarus heard and obeyed.' If our conjecture be well founded, we think Mr. Keith's sentiments on the sublime differ from those of Longinus.

We would be understood to have spoken only of the first part of this performance: we think the second far less exceptionable, and, on the whole, well written; and hope the author's volume of sermons, of which this is a specimen, will prove more nearly to resemble the latter than the former part.

*An Enquiry into the Design of the Christian Sabbath. By J. Symons, B. D. The Second Edition. Small 8vo. 1s. 6d. Dilly.*

This valuable little tract being much enlarged, entitles it again to be mentioned. It was first noticed in our Review of November, 1779. All we said then to its advantage is still due to its merit; and with pleasure we now observe, that it is not more enlarged than improved. A proportionable addition to its price being now charged, former purchasers cannot complain.

This performance is instructive, serious, and persuasive; but free from any tincture of gloom or superstition. It is written with such ease, simplicity, and correctness, that the most fastidious reader can scarcely fail to be pleased with its style, at the same time that the plainest must always comprehend it.

We are persuaded that if the topics of the several sections had been expressed in Italics on the margin of each, their contents would have been better calculated for recollection. But this defect may be well remedied, by that repeated perusal which the book deserves, and we gladly recommend.

We wish to advertise the zealous advocates and promoters of the Sunday schools, that their establishments may in due time derive material advantage from this publication.

*The Footstep to Mrs. Trimmer's Sacred History, for the Instruction and Amusement of Little Children.* 12mo. 1s. 8d. Marshall.

One of the most important, though not the most brilliant, among the literary improvements of the present age, is the successful execution of several elementary performances for the use of children, from their earliest introduction to letters, till they become capable of higher instruction. This province, humble as it may seem, requires more than ordinary talents; and the author of this little work has not undertaken it without the necessary qualifications.

The principal histories of the Old Testament are presented with perspicuity and neatness, in short stories, adapted to the comprehensions and memories of almost the youngest readers; and through the whole are scattered, with the utmost plainness and brevity, such moral and religious sentiments, as are proper to make impression on the tenderest minds.

The Advertisement prefixed to the work will give those who are concerned in the early instruction of the rising generation, an adequate idea of the author's design in its publication; and as we think this performance well calculated to answer the purpose intended, we present this short preface to the public.

'The following pages are, with great diffidence, offered to the world by a lady, who, sensible of their imperfections, solicits the indulgent perusal of parents and teachers.—Nothing could have induced her to appear in public, but the wish to be useful to those dear children whom it has been her province to instruct.

'Being convinced, that the Scriptures ought ever to be the rule of our faith, and guide of our actions, the author wished her pupils to become acquainted with sacred history, and not finding any book of the kind that suited her purpose, she selected the following stories; which it is hoped will both amuse and instruct.—She has made it her study to bring the language down to the confined understanding of a child; and to contract the stories within the bounds of an easy lesson.

'The writer of these pages thinks some apology due to Mrs. Trimmer, for making use of her name in the title to this publication. The high opinion she entertains of Mrs. Trimmer's Sacred History, made her wish to put it into the hands of her pupils;



pupils; but finding it above the understanding of very young children, she has, in this, attempted to form a Foot-step, to lead them to Mrs. Trimmer's more improved work.'

*Strictures on Ecclesiastical Abuses. Addressed to the Bishops, Clergy, and People of Great Britain. 8vo. 1s. Dilly.*

This inflammatory declaimer has advanced upon his eight topics—Ordination—Non-Residence—Presenting to Livings—Bonds of Resignation—Pluralities—Parsonage-Houses—Ecclesiastical Sinecures—and Indolence of the Clergy—all that common-place invective, and nothing more, which is usually inspired by an aversion to the payment of tythes, and that zealous spirit of reformation, which the recovery of ecclesiastical dues, on the part of some fortunate incumbent, has not unfrequently produced. We will charitably hope this writer has been influenced by better motives.

That evils exist in the church, as they do, and must do, in all extensive establishments, cannot be denied; but the present observer has undoubtedly viewed them through a multiplying medium, which, we are somewhat inclined to believe, has been held up to his mind's eye, by prejudice or passion.

A certain want of precision and elegance in these *Strictures*, furnish reason to imagine the subject of them has been taken up by a person whose education has not qualified him for very exact investigation; which, on topics of this nature, cannot be too nice, nor successfully conducted, without coolness and candour.

*Essay on the Rewards of Eternity. 4to. 1s. Johnson.*

This discourse obtained the annual prize, instituted by Mr. Norris, in the university of Cambridge. As we meet in it with nothing uncommon, we cannot but suppose that the productions of the other candidates must have been very deficient in merit.

*Sermons adapted to the Family and Closet. By the late Rev. J. Webb, 4s. in Boards. Buckland.*

We are informed, in a Preface to these *Sermons*, that the peculiar modesty of Mr. Webb prevented him from publishing any thing during his life. 'Tis pity that the judgment of the editor did not co-operate with the author's diffidence, and suppress the publication of these *Sermons* after his decease.

*The Duties of the Parochial Clergy of the Church of England considered, in a Charge delivered to the Clergy of the Diocese of Bangor, in 1784. By John, Lord Bishop of Bangor. 4to. 2s. Davis.*

This is a sensible, useful, and unaffected discourse, becoming the character of the respectable prelate who delivered it. In an Appendix to it are directions concerning the instruments proper to be brought for obtaining orders, &c.

D R A-

## D R A M A T I C.

*The Romp: a Musical Entertainment, in Two Acts; altered from Love in the City.* 8vo. 1s. Lowndes.

The merits of this musical entertainment will not bear the examination of criticism; and nothing but the comic powers of Mrs. Jordan could have procured it a repetition upon the stage.

## N O V E L S.

*The Gamesters. A Novel. In Three Vols.* 12mo. 7s. 6d. sewed. Baldwin.

Though we trace our author in the footsteps of some of her predecessors, we must still allow her considerable merit. The characters are not less distinguished by their bold and faithful outlines, than by a warmth of colouring, and spirited attitude. In some respects they are superior to their originals; for they rise to a distorted caricature, though somewhat removed from real life. The language is animated and easy; frequently elegant: the pathos is well managed, and properly contrasted. We would not, however, be understood too generally: the story has faults in its conduct, and, in some instances, improbability; nor are its merits, even when perspicuous, always unalloyed; but, while we cannot be blind to its faults, we ought to praise its excellencies; and when the latter are so numerous they will, in the eye of every candid critic, lessen or obscure the former.

*The Liberal American. A Novel. In a Series of Letters. By a Lady.* 2 Vols. 12mo. 6s. Lane.

We often suspect these professional ladies, when the title is not supported by internal evidence. The only proof in the work before us, is the number of marriages. The author, like Mrs. Centlive, 'fairly puts all characters to bed.' As to the sentiments, language, and situations, we can say little in their favour. It is a dull, insipid narrative, related in uninteresting letters.

## P O E T R Y.

*Poems and Plays. By William Hayley, Esq.* Small 8vo. 6 Vols. 1l. 1s. Cadell.

Having already expressed the high opinion we entertain of Mr. Hayley's poetical genius, it is unnecessary for us to make any other observation on the present edition of his works, where the only new piece we meet with is an Ode to the Countess de Genlis, in which the author compliments her, in an elegant strain, on the ingenuity and moral tendency of her writings.

*The*

*The India Guide; or a Journal of a Voyage to the East Indies, in the Year 1780. In a Poetical Epistle to her Mother, by Miss Emily Brittle. Small 8vo. Printed at Calcutta.*

This work is dedicated to Mr. Anstie, of whose ingenious Bath Guide it has been evidently intended as an imitation; but, like most of the productions founded in an attempt at similitude, falls extremely short of the original. It consists of several epistles, written on board the East-Indiaman, in which miss Brittle sailed from the Cape of Good Hope, and from Madras; describing her disagreeable situation at sea, the characters of the officers and passengers, the manners of the Dutch at the Cape, with her reception at Madras, and the state of society in that quarter. In this Epistle, she must not be denied all pretensions to merit; and the scenes being exotic, are calculated to afford entertainment by their novelty.

#### M I S C E L L A N E O U S.

*Hydrometrical Observations and Experiments in the Brewery. 8vo. 2s. Robinson.*

We are pleased to see that observations of this kind are widely diffused, and that science is extending her connection with arts usually accounted practical. These rules and experiments are clear and perspicuous; perhaps more intelligible to the common brewers than the 'Statistical Estimates' which we lately reviewed: at the same time the authors do not essentially differ.

Our present author uses, or at least seems to use, the common hydrometer: Mr. Richardson employed one somewhat different. The alteration, in Mr. Baverstock's opinion, is not advantageous, and may, by being frequently employed, become ineffectual. But this must be decided by observation.

Another variation in opinion occurs in the method of forming average and standard gravities. Mr. Richardson makes his trials on worts in the copper, and estimates the quantity to be boiled away: Mr. Baverstock thinks this an useless labour, and prefers delaying the examination till the whole is put into the cooler. The latter is more easy and certain, if we wish only to know the *actual* strength; but the former appears to be necessary, if we wish to bring the wort to a *given* strength. Each method will probably have its peculiar advocates, and each will be employed according to the intention and design of the brewer. On the whole, this work is written with clearness and precision, and deserves commendation.

*Flora Cantabrigiensi Supplementum, Auctore Richardo Relhan, A. M. Collegii Regalis Capellano. 8vo. 1s. Cadell.*

The labours of the industrious are always rewarded. Our author has resumed his task; and added considerably to his  
Flora.



**Flora.** The additions are chiefly different species of grass, and some species of the class of cryptogamia. We find the same diligence and attention which we formerly commended: the additional references are to Bauhine and to Dickson. We sincerely hope that the impediments which the author hints at will be removed; and that he will be enabled to persist in an office, for which he is well qualified.

*Elements of English: being a new Method of teaching the whole Art of Reading, both with Regard to Pronunciation and Spelling. Part the First. By Thomas Sheridan, A. M. 12mo. 1s. Dilly.*

Mr. Sheridan's abilities in this branch of science are so well known, that to praise them would be equally superfluous and impertinent. This little work is clear, comprehensive, and satisfactory. In some instances, as in his Dictionary, we see traces of a provincial pronunciation; but this subject is so fleeting and uncertain, that perhaps no one can properly criticise the pronunciation of another. In general, those whose ears are accurate, and whose companions are among the learned of higher rank, will agree in pronouncing many words; but a few will always remain, where a difference is not only obvious, but the various opinions on the subject will be strenuously defended.

‘None go just alike, but each believes his own.’

A high sense of the importance of his work (for every man thinks that work important in which he has been long engaged) has led Mr. Sheridan into some ludicrous remarks. If they occur in the following specimen, we hope our readers will not consider it as chosen to lessen him in the public estimation, since few estimate him more highly than ourselves; but we have subjoined it, as containing a good reason for what many have thought a fanciful innovation.

‘Children ought not to be taught to sound the consonants in the promiscuous manner in which they are found in the alphabet. The natural order is first to begin with the labials, as those are the first sounds uttered by all the children in all parts of the globe; on which account the words baba, papa, mama, are the names given to parents in almost all languages. The reason is, that the lips of the infant, being constantly employed in the action of sucking, become strong and active sooner than the other organs of speech. To these succeed the dentals; and the next sounds uttered by children are da and ta, or the same sounds doubled, as da-da, ta-ta; and this arises from the tongue's being constantly exercised about the gums, to alleviate the pain while they are cutting their teeth. The last and hardest sounds are the palatines, which requiring that the tongue should be drawn back, an action to which it had not been accustomed, are the most difficult to attain; but by sound-  
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ing them frequently with the vowel before, as eg, ek, will soon be caught. Children should never be urged to pronounce any words containing letters whose sounds they had not first mastered; for in that case, they either wholly omit those letters, or change them to others which they were able to pronounce before. Thus, for lady, they either say, ady or dady; for coach, toach; for go, do; and so on. Now, from this method of permitting children to attempt all words alike, before they can pronounce all the letters contained in them, bad habits are often contracted, which are not easily changed.

*An Introduction to Reading and Spelling. Written on a new Plan, and designed as a Spelling Book for the Use of Schools. By the Rev. J. Hewlett. 8vo. 1s. Johnson.*

If Mr. Hewlett purposes only to teach children, he has done too much; if he aims at instructing foreigners, or correcting a provincial pronunciation, too little. The child cannot learn every word in his elements; he should be taught a few, and, in the rest, instructed to teach himself. On the other hand, the great fault of the foreigner and the provincial is in tone, or rhythm, which no rules can teach. Yet, on the whole, as this work is executed with care and attention, its redundancy can be no great fault. A judicious master can omit what may be superfluous; and the foreigner should not be disgusted at the preliminary observations, and some of the grammatical distinctions, suitable only for children. We should not perhaps have expected that this little work was intended to have reached beyond the limits of the reading-school, if the author had not pointed out its numerous advantages.

*Fabulous Histories designed for the Instruction of Children, respecting their Treatment of Animals. By Mrs. Trimmer. 12mo. 2s. 6d. Robinsons.*

There is much good sense, and useful instruction, in this little volume; but the vehicle is so very childish, that we fear the author's purpose will be defeated. In this, however, we may be mistaken; for to mean well, and to labour assiduously in support of well-meant designs, will deck even imperfections with such pleasing colours, that we shall often mistake them for excellencies. May this lady's good intentions be rewarded with the suitable improvement of her pupils.

*The Happy Family; or, Memoirs of Mr. and Mrs. Norton. Intended to shew the delightful Effects of Filial Obedience. Small 12mo 6d. Marshall.*

This little book is free from the imperfections which we lately pointed out in the 'Village School,' and the 'Rotchfords;' but the sentences are too complicated, and the sentiment frequently obscured by too many words. There are few tasks more difficult than to write proper books for children, and there are few more carelessly and exceptionably executed. The  
moral

moral in the work before us, is not less clear than salutary ; and the instructions are perfectly proper.

*Tour to Ermenonville.* 12mo. 2s. Becket.

This pamphlet bears strong intrinsic marks of having been written as a catch-penny ; but it may, nevertheless, afford some entertainment to those readers who take pleasure in the most trivial anecdotes relative to the celebrated Rousseau, concerning which it is employed.

*A Classical Dictionary of the Vulgar Tongue.* 8vo. 4s. Hooper.

The materials of this extraordinary Lexicon could be collected only from the mouths of the *vulgar* ; and to the criticism of such we must consign it.

*Pocket Kade Mecum through Monmouthshire and Part of South Wales.* 12mo. 1s. 6d. Bew.

A dull, superficial itinerary, having neither description nor information to recommend it.

*The Trial of Isaac Prescott, Esq.* 8vo. 2s. 6d. Lister.

This Trial was held in the Consistory Court at the Doctors Commons, and relates to such barbarous treatment, received by a wife from her husband, as is, perhaps, scarcely to be exceeded by any instance in the annals of domestic life. This highly injured lady, it seems, is the daughter of the Rev. Mr. Walter, who was chaplain to the Centurion during the celebrated voyage of commodore Anson. It would only wound the humanity of our readers, to recite the savage cruelty which is confirmed by the evidence in this Trial ; and we shall, therefore, conclude with a congratulation, that a sentence of divorce has put a period to such unmanly and execrable tyranny.

*A Natural Method of teaching the French Language.* By M. Maubach. 8vo. 3s. Hookham.

Monf. Maubach, by his own acknowledgement, has not studied to adapt himself to the capacity of children ; but, on the contrary, to rise above the common method of teachers, by rendering their instructions a kind of introduction to the sciences. This plan is doubtless well intended ; but we much fear, that by adding to the difficulty of acquiring the language, it might retard the progress of the learner.

*The Surveyor's Appointment and Guide.* 4to. 6d. T. Payne.

In this little tract, the author has concisely translated, out of statute language, the duty of a surveyor of the highways. The production, we own, is not without its use ; for of every species of composition, that of the legislative authors, in this country, is the most exceptionable, and even disgraceful, both in point of grammar and common sense.

An



*An Authentic Account of Forgeries and Frauds of various Kinds committed by that most consummate Adept in Deception, Charles Price, otherwise Patch, many Years a Lottery Office Keeper in London and Westminster. 8vo. 1s. Kearsley.*

Those who have any curiosity for the account of a most accomplished impostor, may be gratified by this pamphlet, in which we doubt not the facts are genuine, though we cannot much applaud the attempt that is made at an imitation of the humour of Fielding. The account is ornamented with a plate, exhibiting Price's figure, both in his usual dress and his disguise.

‘ He was about five feet six inches high, and a compact neat-made man, rather square shoulders, and somewhat inclined to corpulency, his legs firm and well-set; but, by nature, his features made him look much older than he really was, which was forty-five. His nose was what we call a parrot's nose, his eyes small and grey; his mouth stood very much inwards, with very thin lips, his chin pointed and prominent, with a pale complexion: but what contributed as much as any thing to favour his disguise of speech, was his loss of teeth. He walked exceedingly upright, was very active and quick in his walk, and was, what we describe a man to be, when we call him a dapper-made man.’

This was his natural appearance; but how different, in his disguise, will be seen from the following short extract:

‘ In October, 1780, which was about the lottery time, Mr. Price put an advertisement into the paper, in which he required a servant who had been used to live with a single gentleman, and the direction was to *C. C. Marlborough Coffee-house, Broad-street, Carnaby-market*. An honest young man, and who then lived with a musical instrument-maker in the Strand, whose name, for very obvious reasons, we keep secret, not being much wanted by his master, and having been desired by that master to look into the papers for a place, happened to read Mr. Price's advertisement, and accordingly sent a letter to the Marlborough Coffee-house, as directed. He heard nothing further of this for a week, when one evening, just as it was dusk, a coach drove up to his master's door, and the coachman enquired for the man who had answered the advertisement, at the same time saying there was a gentleman over the way in a coach wanted to speak with him. On this the young fellow was called, and went to the coach, where he was desired to step in. There he saw an apparent old man, a foreigner, gouty, wrapped up with five or six yards of flannel about his legs, a camblet surtout buttoned up over his chin, close to his mouth, a large patch over his left eye, and every part of his face so hid, that the young fellow could not see any part of it, but one eye, his nose, and a small part of his cheek. To carry on the deception still better, Mr. Price  
thought

thought proper to place the man on his left side, on which eye the patch was, so that the old gentleman could take an askance look at the young man with his right eye, and discover then only a very small portion indeed of his face. He appeared by this disguise to be between sixty and seventy years of age; and afterwards, when the man saw him standing, not much under six feet high, owing to boots or shoes, with heels very little less than four inches. Added to this deception, he was so buttoned up and straightened as to appear perfectly lank.'

*The Life of that extraordinary Character, Mr. Charles Price; wherein are minutely described the various Artifices he made use of in circulating his Forgeries on the Bank.* 8vo. 1s. Ridgeway.

Another Narrative, in some parts copied, in others abridged, from the same materials, to gratify the public curiosity on this temporary subject. This is considerably less extensive than the preceding; and instead of the two contrasted figures, at full length, contains only a portrait of the unhappy man in the dress in which he usually appeared abroad.

## C O R R E S P O N D E N C E.

WE acknowledge the receipt of the Old Planter's Letter, and can only add that our opinion on that work is established by the decisions of the ablest judges. As we have not the Philosophical Transactions at present near us, we cannot particularly refer to the paper. It is in French and English; and that which we allude to, is far from being so partial in its object as our correspondent represents: we recollect many parts of it very distinctly.

HAVING, at the close of our account of Mr. Fell's Answer to Mr. Farmer, mentioned the similarity which Mr. Fell endeavours to prove between the ideas of Mr. Farmer and those of Mr. Hume and Lord Bolingbroke, on the subject of Miracles, we expressed our hopes that Mr. Farmer would favour the world with those exceptions which he wishes to maintain in behalf of the miracles of holy writ. A correspondent informs us that this is what Mr. Farmer *had already done* in the most explicit and satisfactory manner, in a passage immediately following Mr. Fell's last quotation. See his *Dissertation on Miracles*, p. 77—80.

A NOTE, apparently in the same hand-writing, assures us, that nothing was farther from the intention of the Editor of Dr. Johnson's Life of Dr. Watts, with Notes, &c. "than to make the public believe the whole of the work to be Dr. Johnson's."



